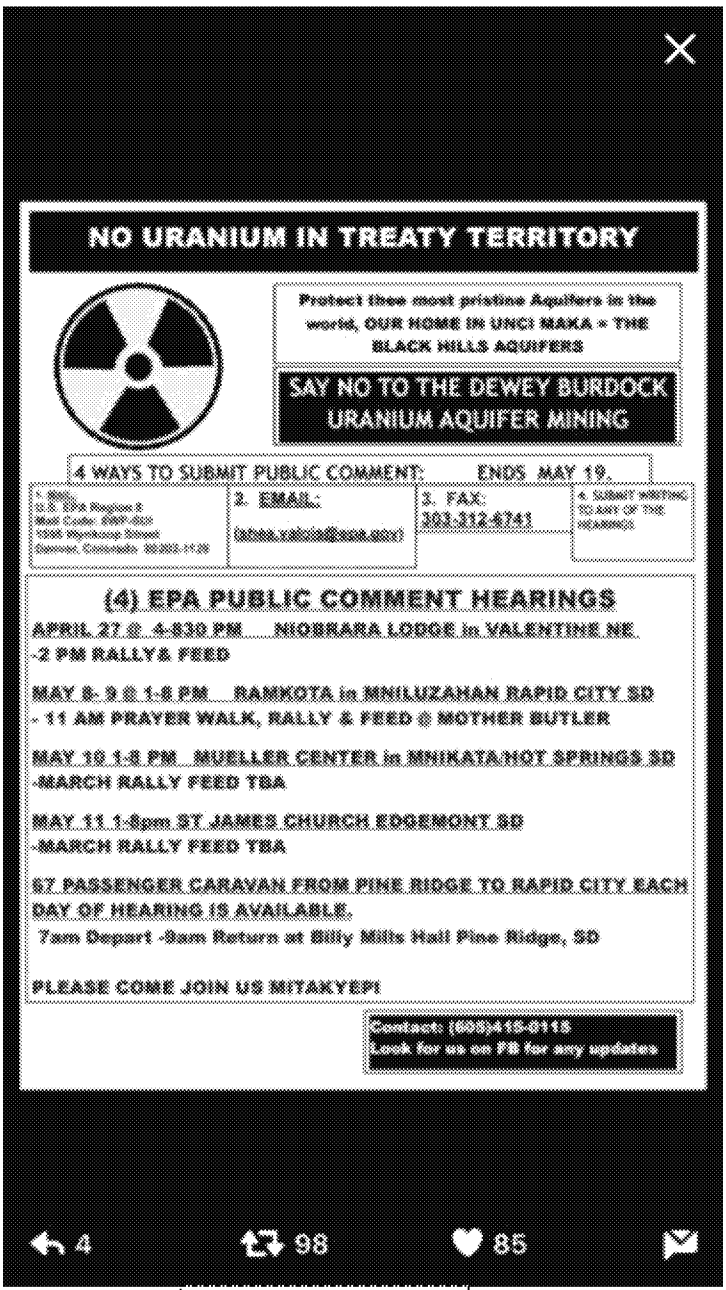
Dewey Burdock Public Comments

@@Stating general opposition to uranium mining, drilling and uranium waste disposal:

No uranium mining in the Black Hills! Do not allow permits for SD lands to become a solution-mining facility. We don't need to be a nuclear waste dump either! Thanks Ex. 6 Personal Privacy (PP)

Dewey-Burdock: I, Ex. 6 Personal Privacy (PP) would like to say "NO" to the Dewey Burdock Uranium Aquifer Mining.
thank you, Ex. 6 Personal Privacy (PP)



Pls stop. Thanks Ex. 6 Personal Privacy (PP)

Stop drilling. Stop Trump. Ex. 6 Personal Privacy (PP)

The Hong Kong/China based uranium mining company, Powertech/Azarga that has been pursuing ISL (in situ leach recovery) mining permits in the Dewey-Burdock, Edgemont area of the Black Hills, is currently requesting permits from the EPA for waivers from the Clean Water Act for the Inyan Kara aquifer in order to implement UIC injection wells for mining, and for hazardous waste permanent deposition from mining activity in the Minnelusa aquifer. Please DON'T Ex. 6 Personal Privacy (PP)

Please do not give permission to drill in nation parks. This is a no brainer! Don't allow dumping uranium waste in an aquifer. Ex. 6 Personal Privacy (PP)

please enter my formal comments as NO! I do not think it's ok for mining waste to be injected into underground aquifer's. Ex. 6 Personal Privacy (PP)

Please do not permit injection of uranium recovery waste. Ex. 6 Personal Privacy (PP)

Absolutely NO uranium mining waste disposal in aquifer! Ex. 6 Personal Privacy (PP)

OBVIOUSLY, there should be no aquifer exemption for Powertech (USA) Inc.'s uranium recovery project. NO. Again... NO. P.S. I'm sorry you have to work for Scott Pruitt. Ex. 6 Personal Privacy (PP)

No to uranium mining waste disposal in SD aquifer. Ex. 6 Personal Privacy (PP)

Absolutely no! This is completely insane! Ex. 6 Personal Privacy (PP)

No. Just, no. Ex. 6 Personal Privacy (PP)

This proposal is simply obscene. Please do everything you can do to stop it. Ex. 6 Personal Privacy (PP)

No! No! No! Radioactive waste in the Aquifer!!! No! No! No! Ex. 6 Personal Privacy (PP)

I am contacting you to voice my opposition to allowing uranium mining waste disposal in SD aquifer. Ex. 6 Personal Privacy (PP)

I am writing to voice my strong opposition to the EPA issuing Underground Injection Control Area permits to Powertech Inc for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. I am specifically horrified that the EPA would allow an exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur and strongly oppose this exemption. Thank you for considering my voice and views in this matter. Ex. 6 Personal Privacy (PP)

I'm against this. please help save our country. Ex. 6 Personal Privacy (PP)

Why not just force feed that waste to the people. Cut out the middle man as it were. Ex. 6 Personal Privacy (PP)

No! Ex. 6 Personal Privacy (PP)

No to uranium dumping Ex. 6 Personal Privacy (PP)

@@Multi-topic (to be parsed out later)

BIOGRAPHY
CAPTAIN Ex. 6 Personal Privacy (PP) USN (RET.)
Ex. 6 Personal Privacy (PP) had parallel professional careers in the Department of Veterans' Affairs and Naval Intelligence. [redacted] enlisted in the United States Marine Corps at age 17 and completed his eight-year obligation to the United States Marine Corps through an active Marine Reserve program. This United States Marine Corps program allowed him to complete both undergraduate and graduate school at the University of Houston, while also fulfilling his eight-year military obligation. During the Vietnam War, Ex. 6 Personal Privacy (PP) was recruited for a direct commission in a United States Naval Intelligence Program. The Navy was seeking individuals with skills in basic science, computer science, and "exotic" linguists. [redacted] education and civilian specialties were chemistry, biochemistry, and psychology. [redacted] also earned a second graduate degree from the Army-Baylor Program at Fort Sam Houston, San Antonio, TX, 1971-1973. Following intensive POW Debriefing training by the Navy, he volunteered for active duty to debrief returning Navy/Marine Corp POWs from Vietnam in 1973.
Concurrent with his Veterans' Administration 34-year careers in medical research and executive health care positions, Ex. 6 Personal Privacy (PP) served 28 years as a Naval Intelligence Officer in twelve Naval Intelligence active reserve units. Ex. 6 Personal Privacy (PP) served three tours of active-duty.
Ex. 6 Personal Privacy (PP) earned 11 Naval Intelligence Certifications. These certificates are known as Navy Officer Billet Codes (NOBC). Examples of these certifications are: Air Intelligence Officer, Naval Attache, Photo Interpreter, Anti-submarine Warfare Officer, and Naval Investigative Service Officer. [redacted] volunteered for active duty during the first Gulf War (1990-1991) and commanded a US Naval Intelligence team during Desert Shield and Desert Storm. The team's mission was to identify weapons, technology, arms, and chemical substraits that had been acquired by Iraq. Also, the Team was to interdict those items still in transit to Iraq before hostilities began. The Navy team was awarded the Defense Meritorious Service medal and a Joint Meritorious Unit Award for their distinctive accomplishments before and during hostilities. Ex. 6 Personal Privacy (PP) was also awarded the Defense Superior Service Medal. Ex. 6 Personal Privacy (PP) was injured while on active duty and formally retired from Naval Intelligence in November 1996.
Date of Information: January 5, 2017
Prepared by MET
Position Statement
SOUTH DAKOTA
ISL Dewey-Burdock EPA Class 3 and Class 5 UIC injection wells for mining and other hazardous waste deposition - March 2017
Summary:

(Help Us Stop This!)
(https://knowmining.org/#portfolio)

~
[Share]
The Hong Kong/China based uranium mining company, Powertech/ Azarga that has been pursuing ISL (in situ leach recovery) mining permits in the Dewey-Burdock, Edgemont area of the Black Hills, is currently requesting permits from the EPA for waivers from the Clean Water Act for the Inyan Kara aquifer in order to implement UIC injection wells for mining, and for hazardous waste permanent deposition from mining activity in the Minnelusa aquifer.
We are opposed to both the mining activity, which would contaminate the Inyan Kara aquifer permanently for agricultural use, for which it is currently being used, and also contaminate other aquifers in the area as well, because of the many fissures, fractures, breccia pipes and sinkholes that are naturally occurring, and the 7,650 unclosed old exploratory boreholes that allow the mixing of aquifers at the site.
We are opposed to the permanent deposition of any mining wastes, including hazardous and

radioactive metals and/or metal salts thereof into any aquifers in the Black Hills which would effectively render the Black Hills a permanent hazardous waste dump-site - and with the ability of the permit holder to take in mining waste from other regional sites, and also sell that permit to other polluters.

We are opposed to injection of chemical lixivients that would dissolve rock and free up toxic metals to pollute the groundwater aquifers in the mining process, that cannot be effectively cleaned up.

Background of Powertech/ Azarga:

The Issue of the 12 Requested Hazardous Deep Injection Wells by Powertech/Azarga at Edgemont, vs the 4 That Would be Permitted

COMPANY HISTORY

1.) Powertech/Azarga is a Chinese based -foreign owned company that is essentially bankrupt. The partners took over a bankrupt refrigerator manufacturing company shell and then declared themselves a uranium mining company, though to date, this company has never mined anything anywhere. As a foreign owned company, they are free to mine and then bankrupt the company when mining reserves are gone, leaving the hazardous and radioactive mess for the taxpayers to clean up. This is the most common scenario with foreign owned mining companies in the U.S. Further, no aquifer has ever been restored anywhere in the world after ISL uranium mining. For this reason, ISL mining is banned in Europe, where numerous mines have completely ruined many aquifers.

2 .) Evidence was presented to the NRC and ASLB in hearings appealing the mining permit issued by the NRC. It was disclosed in these hearings that the Tennessee Valley Assoc. thoroughly explored the area in question for more mine-able uranium deposits after the roll front of uranium was mined out in the 1950's by surface mining. TV A came to the area several times, years apart, and drilled a total of 7650 boreholes looking for more mineable/ extractable uranium, but failed to find any. TV A subsequently abandoned the site, leaving those boreholes not properly closed for the most part, that then allowed further mixing of the aquifers even more than the already naturally existing numerous fractures, fissures, breccia pipes and sinkholes that are common in this continuing uplift region. This was when uranium yellow-cake was in high demand during the Cold War and the spot price was $100.00 per lb. Today, the spot price for yellow-cake is currently $18.00 per lb, with the production break even cost of $63.00 per lb. Powertech/Azarga was ordered by NRC/ASLB to find and properly close all of those boreholes before they would be able to actively mine, as ISL mining requires aquifers to be contained properly for extraction efficiency. This is a hugely expensive process and to date, no work has been done on this. Powertech/ Azarga does not have the finances to do this, and ISL uranium mining is not profitable today, and not projected to be in the future.

3.) In addition, ISL technology was available back in the 1950's and 60's when the exploration was done, but the amount of "recoverable" uranium at Dewey Burdock was not deemed sufficient by TV A for mining in any form, as they said that the roll front was gone. So by these former experts, upon extensive exploration, there is no recoverable uranium at that site left. Powertech/ Azarga's own testing showed that the highest levels of uranium found were in the alluvial wells that are surface, and not mine-able, as they cannot be contained. With the extensive mixing of aquifers and the 7650 open boreholes that contaminate the aquifers, there is likely organified uranium and other toxic metals by bacteria that create a form of organic uranium that is not recoverable by ISL anyway. Organic uranium does not bind to the resin beads in the "glorified water softeners" of ISL recovery. So the only money to be made at this site is from taking in hazardous toxic mining wastes from other mines to dump into our aquifers and make the Black Hills a toxic waste dump.

4.) Powertech/Azarga is asking for 4 Class 5 UIC deep injection wells for hazardous waste deposition, into the Minnelusa aquifer, with a reserve request for 4 more of the same "in case they find the they need them". They say they need 2 of these "right away". Powertech/ Azarga will operate 14 well fields total. The Minnelusa aquifer is a major drinking water aquifer in the Black Hills. To say that it is not, is not correct.

A. For comparison, Crow Butte ISL uranium mine in Crawford, Nebraska, operated 11 well fields for 20 yrs using a single UIC hazardous waste deep injection well for

deposition of their toxic wastes. Dewey Burdock originally requested a total of 8 UIC hazardous waste deep injection wells, but EPA is only permitting 4, still too many for a non functional, no profit mine, two of which are requested to be drilled right away. (Really? What do they need them all for? No work has been done to find and properly close any of the old borehole sites that is required by NRC, followed by adequate pump testing to make sure that the aquifer is contained prior to actively mining. EPA is not requiring borehole closure for the injection wells. This spells certain "disaster" even more.)

• By the numbers: Smith Ranch in
OUR Backyard is Your Backyard!
WY: 10 well fields, one deep injection
well Crow Butte, Ne: 11 well fields, lhttos:/Lknowmining.org/#poctf91ioll
one deep injection well for 20 yrs. .
Willow Creek, composed of two sites,
Christensen Ranch and lrigary- 2
injection wells.

5.) Powertech/ Azarga has also applied for Class 3 injection wells for 14 well fields. This will be an additional 84 injection wells that will be receiving rock dissolving chemicals/lixivients for production. Normally a well field contains one production well for extraction surrounded by 6 injection wells. Further, the 14 production well fields are not on a uranium rich roll front, as per TV A documents. (uranium ISL mines are typically situated on a uranium rich roll front so that extraction is efficient and the mine is profitable. Remember, the roll front was found by TVA to be mined out prior by surface mining)

6.) The 4 hazardous waste deep injection wells in the area are destined for the Minnelusa aquifer, a drinking water aquifer in the Black Hills. Normally, UIC hazardous waste deep injection wells are drilled "below" aquifers, not "in" them. The hazardous waste injected into the aquifer will travel hundreds and even thousands of miles and contaminate other aquifers that are connected, and ultimately the huge Ogallala Aquifer that services the entire central US. In addition, these hazardous waste wells will legally be able to take in the water of the hazardous wastes, containing radioactives, with toxic and heavy metals from other mining sites, to make our aquifers a toxic waste dump, and ruin the water we have there. These permits are also able to be sold to another company once issued, if the original company Azarga/Powertech files bankruptcy or sells the permits. These permits, once issued, can be renewed indefinitely. Since the wastewater will contain radioactives and toxic heavy metals, the ultimate destination as to which class of deposition well is required, is determined by the proximity of the drinking water aquifer near it, above or below. Powertech / Azarga has played a semantics game with the determination of the class of disposal well required, however the toxicity of the ultimate wastewater is still the same. See "From the Permit" below.

7.) The claim that Powertech/ Azarga is going to treat the wastewater first to "purify" it to classify for the Class 5 deep injection regulations, does not include the inability to extract radioactive organified metals that are now found in wastewater by ISL in several studies, notably uranium. By regulation, Class 5 waste waters can only be as toxic as storm sewer waters. This wastewater is hardly that. Radioactive organified metals and metallic salts in this wastewater make this waste water unusable for even agricultural purposes, as it would be in this dry uplift area where water is "blue gold", if it were as "pure" as the company says it is. Better technology today shows us the flaws of obsolete testing and regulations today, and why we see such horrid toxicities in Nature at mining sites. The company has not shown any technology that could be effective in processing this wastewater to be safe for a Class 5 well. And the extra great expense of this processing will cost the profitability of the project dearly. They already cannot pay their mining land leases and are essentially bankrupt going in to this project. See the toxicology testimony by Linsey McLean, expert witness for Consolidated Intervenors, to the Nuclear Regulatory Commission and Atomic Safety and Licensing Board on the birth deformities found in wildlife and domestic farm animals studied in ISL mining sites contaminated by toxic waste water and radioactive metals.
https:Uwww,nrc,gov/docs/ML1513/ML15132AS07,pdf

{https:Uwww.nrc.gov/docs/ML1513/ML15132AS07,pdf}
https:llwww.nrc,gov/docs/ML1513/ML15132AS06,pdf
{https:llwww.nrc.gov/docs/M L1513/M L15132AS06.pdf}
The business model for this Chinese based company in Dewey-Burdock is very likely to never start uranium mining to begin with, as by their own admission, the price of uranium is far too low for profitability. They intend to use these injection wells for importing hazardous toxic mining wastes from other sites for profit, making the Black Hills an everlasting toxic waste dump. They state that they need two deep injection wells for hazardous wastes right away.
What is an Injection well/UIC?
An injection well is a device that places fluid deep underground into porous rock formations, such as sandstone or limestone, or into or below the shallow soil layer. The fluid may be water, wastewater, brine (salt water), or water mixed with chemicals.
In waste water disposal, treated waste water is injected into the ground between impermeable layers of rocks to avoid polluting fresh water supplies or adversely affecting quality of receiving waters.
**In the case of this EPA permit, the injection will go directly into the Minnelusa aquifer and not in rock formations where injections typically are directed.
Injection wells are usually constructed of solid walled pipe to a deep elevation in order to prevent toxic injections from mixing with the surrounding environment.
http:Uen.wikipedia.org/wiki/loiection well (http:Uen.wikipedia.org/wiki/lnjectjon welll
Until the 1960s, drillers could just dump this stuff wherever they wanted. Being extremely salty and full of chemicals, this is obviously a bad idea. The 1960s saw the introduction of deep injection wells. The idea was that if you could inject fluids into rocks thousands of feet underground, the toxic waste would stay there forever. In order for this to work, the rock layers have to be porous, like a sponge, and the waste has to be injected under pressure to force its way into the rocks.
Regulatory Requirements of Deep Injection Wells
In the United States, injection well activity is regulated by the United States Environmental Protection Agency (EPA) and state governments under the Safe Drinking Water Act {http:llen.wikipedia.org/wiki/Safe Drinking Water Actl (SDWA). EPA has issued Underground Injection Control (UIC) regulations in order to protect drinking water sources. The EPA has defined six classes of injection wells.
Class I wells are used for the injection of municipal and industrial wastes beneath underground sources of drinking water.
Class II wells are used for the injection of fluids associated with oil and gas production, including waste from hydraulic fracturing.
Class III wells are used for the injection of fluids used in mineral solution mining {en.wikipedia.org/wiki/Solution mining) beneath underground sources of drinking water. (ISL Uranium mining falls in here)
Class IV wells, like Class I wells, are used for the injection of hazardous wastes but inject waste into or above underground sources of drinking water instead of below.
Class V wells are those used for all non-hazardous injections that are not covered by Classes I through IV. Examples include storm-water drainage wells and septic system leach fields {en.wikipedia.org/wiki/Septic drain fieldl.
Class VI wells are used for the injection of carbon dioxide for sequestration, or long term storage. Currently, there are no Class VI wells in operation, but 6 to 10 wells are expected to be in use by 2016.
http://peo0le µwee edy/pjercech/HazwasteWebsSp04/
DeepWellloiectjon/QeepWell Injection btm
{bttp://oeop1e uwec,edy/pjercech/HazwasteWebsSp04/PeepWellloiectjon/DeepWellloiectjon html
Injection Wells Don't Just Pollute
1.) They are well known to cause earthquakes, as hazardous wastes are continuously being pumped into the aquifers at high pressure, and the wastes are meant to stay in the ground forever. The pressure that the wastes exert in the aquifer forces the wastes to move

vertically and horizontally in all directions, mixing with the local waters there and traveling with the flow underground. The pressure also causes more fractures and fissures in the rock layers, causing earthquakes, and further mixing of the wastes into the aquifers. Fracking is a similar principle. Oklahoma has been the site of numerous tracking areas and have increased a record number of earthquakes and contaminated drinking water wells, and the earthquakes continue even after two years of a tracking ban.

INJECTION-INDUCED EARTHQUAKES

A July 2013 study by US Geological Survey scientist William Ellsworth links earthquakes to wastewater injection sites. In the four years from 2010-2013 the number of earthquakes of

(OUR Backyard is Your Backyard!)
502
Like
Share

magnitude 3.0 or greater in the central and eastern United States increased dramatically. After decades of a steady earthquake rate (average of 21 events/year), activity increased starting in 2001 and peaked at 188 earthquakes in 2011. USGS scientists have found that at some locations the increase in seismicity coincides with the injection of wastewater in deep disposal wells. Injection-induced earthquakes are thought to be caused by pressure changes due to excess fluid injected deep below the surface and are being dubbed "man-made" earthquakes.

htto:lloeoole.ywec,edy/piercech/HazwasteWebssoo4/DeepWellloiectjon/DeepWelllniectjon htm

lhttp·//peoole uwec edy/ojercech/HazwasteWebsSo04/DeeoWellloiectjon/DeeoWell\oiecti0o html

References:

High-rate injection is associated with the increase in U.S. mid-continent seismicitv (https:ijpubs.er.usgs.gov/publ ication/70161978)

Barbara A. Bekins, and Justin L. Rubinstein Abstract An unprecedented increase in earthquakes in the U.S. mid-continent began ... in 2009. Many of these earthquakes have been documented as induced by wastewater injection. We examine the relationship between wastewater injection ... and U.S. mid-continent seismicity using a newly assembled injection well database for the central and eastern United States. We find that the entire ... increase in earthquake rate is associated with fluid injection wells. High-rate injection wells (>300,000 barrels per month) are much more likely to be ...

Induced Earthquakes (https://earthquake.usgs.gov/research/induced/myths.phpl

The primary cause of the recent increase in earthquakes in the central United States. Wastewater disposal wells typically operate for longer durations and ... injection wells induce earthquakes. Most injection wells are not associated with felt earthquakes. A combination of many factors is necessary for injection to ... induce felt earthquakes. These include: the injection rate and total volume injected; the presence of faults that are large enough to produce felt ... earthquakes; stresses that are large enough to produce earthquakes; and the presence of pathways for the fluid pressure to travel from the injection ...

Injection-induced earthquakes {https:llpubs,er.usgs.goy/publication/70048668)

Abstract Earthquakes in unusual locations have become an important topic of discussion in both North America and Europe, owing to the concern that ... and underground mining, withdrawal of fluids and gas from the subsurface, and injection of fluids into underground formations. Injection-induced ... production of oil and gas from previously unproductive formations. Earthquakes can be induced as part of the process to stimulate the production from tight ... associated with industrial activity, with a focus on the disposal of wastewater by injection in deep wells; assess the scientific understanding of induced ...

A Century of Induced Earthquakes in Oklahoma? {https:Uwww.usgs.goy/news/centurv-inducedearthquakes-oklahomal

related to oil production, particularly disposal of wastewater in deep injection wells, are known to potentially cause earthquakes. Prior to the ... Release Date: October 26, 2015The rate of earthquakes has increased sharply since 2009 in the central and
eastern United States, with growing ... evidence confirming that these earthquakes are primarily caused by human activity, namely the injection of wastewater in deep disposal wells. The rate of ... earthquakes has increased sharply since 2009 in the central and eastern United States, with growing evidence confirming that these earthquakes are ...
Sharp increase in central Oklahoma seismicity 2009-2014 induced by massive wastewater injection (https://pu bs.er .usgs.gov /pu bl ication/70137863)
data required to unequivocally link earthquakes to injection are rarely accessible. Here we use seismicity and hydro-geological models to show that ... earthquakes to distances of 35 km, with a triggering threshold of-0.07 MPa. Although thousands of disposal wells may operate aseismically, four of ... Sharp increase in central Oklahoma seismicity 2009-2014 induced by massive wastewater injection Science By: Kathleen, M. Keranen, Geoffrey A. Abers ... , Matthew Weingarten, Barbara A. Bekins, and Shem in Ge
2.) Other common problems with deep injection wel Is are non approved hazardous wastes being dumped in there, as there is essentially no daily oversight. Wells are not maintained well and over pressure causes pipes to crack, dispersing the toxins in higher levels than they are supposed to be. Spills are common on the surface and accidents when truck hauling the toxins slip off road in icy roads, hit deer etc. and cause an instant dirty bomb at the site, that is not able to be cleaned up as it soaks into the ground. In this case, toxic and heavy metals and radiation.
2008-2010
Cases of Water Contamination Violations
CLASS-2 WELLS: 22
OTHER WELLS: 77
Cases of Unauthorized Injection= 859
Cases of Pressurized Injection= 1,199
Test Failures for Significant Leaks= 6,723
Total Wells with Violations= 60,467
http://projects.propublica.org/graphics/underground-injection-wells !http:llprojects.propublica.org/graphics/underground-injection-
STRUCTURAL FAILURES
A ProPublica review of well records, case histories, and government summaries of more than 220,000 well inspections from October 2007 to October 2010 found that structural failures inside injection wells are routine. From late 2007 to late 2010, one well integrity violation was issued for every six deep injection wells examined - more than 17,000 violations nationally. More than 7,000 wells showed signs that their walls were leaking. Records also showed wells are frequently operated in violation of safety regulations and under conditions that greatly increase the risk of fluid leakage and the threat of water contamination. ProPublica's analysis showed that, when an injection well fails, it is most often because of holes or cracks in the well structure itself.
UNAUTHORIZED INJECTION
Basically illegal dumping, EPA officials describe this as the most serious of all violations. It means waste was dumped into a well without a permit or without being legally approved for a certain location. State regulators say most violations are for bad paperwork, but in some cases, oil and gas companies have dumped dangerous waste meant for Class 1 wells into Class 2 wells to avoid fees and tighter regulations.
MECHANICAL INTEGRITY VIOLATION
Mechanical Integrity testing, or MIT, is the primary way of checking the condition of injection wells. All Class 1 and Class 2 deep injection wells are required to be tested regularly, often by pressurizing the well and waiting to see if any of the pressure escapes, indicating a crack in one of the well's layers. Regulators say most violations indicate a small problem that, caught early, prevents a larger failure in the future. But some failures noted in federal records do describe "significant"leaks and migration of waste.

OVER PRESSURIZED INJECTION
When waste is injected at higher pressure than is allowed on an injection well permit, it can either break out of the well or fracture the rock underground, creating new pathways for that waste to migrate into, and pollute, water supplies. A violation means that the pressure caused waste to move outside of its intended zone and endanger drinking water.
TEST FAILURES FOR SIGNIFICANT LEAKS
This means that a well failed a mechanical integrity test and "caused the movement of fluids outside of the authorized zone," because either its cement or steel structure, or the tubing that lines the inside of the well, had a crack.
WATER CONTAMINATION
In the reports each state submits to the EPA annually, they list the number of cases where an underground source of drinking water was believed to have been polluted as a result of leaking injection wells.
http://www.sourcewatch.org/index.php/lnjection well
(http://www.sourcewatch.org/index.php/lnjection welll
Here are some of the multiple regulations for the construction and maintenance of monitoring and testing wells:
• follow waste analysis plan
• perform Mils at required intervals
• reporting and record Keeping
• record injection fluids and all monitoring results
• report on any changes at facility and noncompliances
Closing
• flush well with non-reactive fluid
• submit plugging and abandonment report
• monitor ground water until injection zone pressure can no longer influence any USDW
• inform authorities of well location and zone of influence
Siting
• AoR testing
• no-migration petition demonstration
• geological studies
Construction
• well is cased and cemented
• proper tubing and packer
• UIC program director must approve plan
Operation
• monitor injection pressure, flow rate, and volume
• alarms and devices to shut down flow if necessary
• maintain pressures that will not initiate cracking
htto·//www eoa goy/safewater/ujc/classonestudy odf (htto,Uwww eoa goy/safewater/ujc/dassonestudy odfl
http://www.mindfully.org/Water/2003/Deep-lnjection-Wells-GA013jul03.htm
{http://www.mindfully.org/Water/2003/Deep-lnjection-WellsGA013jy103.html
Problems with Recovery of Mined Minerals
When Organic Compounds Contaminate an
Aquifer
Summary: You cannot recover all of the uranium from the mining water. Organified uranium compound levels will build up in the wastewater.
Arabian Journal of Chemistry
Volume 4, Issue 4. October 2011 (www.sciencedirect.com/science/journal/18785352/4/4l. Pages 361
-377
PROBLEMS WITH ION EXCHANGE IN WATER PURIFICATION
Ion exchange is another method used successfully in the industry for the removal of heavy metals from effluent. An ion exchanger is a solid capable of exchanging either cations or anions from the surrounding materials. Commonly used matrices for ion exchange are synthetic organic ion exchange resins. The disadvantage of this method is that it cannot

handle concentrated metal solution as the matrix gets easily fouled by organics and other solids in the wastewater. Moreover ion exchange is non-selective and is highly sensitive to the pH of the solution. (Kurniawan et al., 2006).

ORGANIFIED URANIUM IS A REAL THING IN ISL MINES

htto://www.newswise.com/artides/slac-studv-helos-exolajnwhv-uranium-persjsts-in-groundwater-at-tormer-mioiog-sjtes lhtto:llwww,newswjse.com/artjcles/slac-studv-helos-exolain-whvuranium-persjsts-io-groundwater-at-tormer-mjnjng-sjtesl

• SLAC Study Helps Explain Why Uranium Persists in Groundwater at Former Mining Sites
• New Details About Uranium Chemistry Show How It Binds to Organic Matter

Article ID: 668799
Released: 2-Feb-2017 2:05 PM EST
Source Newsroom: SLAC National Accelerator Laboratory

Newswise- Decades after a uranium mine is shuttered, the radioactive element can still persist in groundwater at the site, despite cleanup efforts.

A recent study led by scientists at the Department of Energy's SLAC National Accelerator Laboratory helps describe how the contaminant cycles through the environment at former uranium mining sites and why it can be difficult to remove. Contrary to assumptions that have been used for modeling uranium behavior, researchers found the contaminant binds to organic matter in sediments. The findings provide more accurate information for monitoring and remediation at the sites.

The results were published in the Proceedings of the National Academy of Sciences.

In 2014, researchers at SLAC's Stanford Synchrotron Radiation Lightsource (SSRL) began collaborating with the DOE Office of Legacy Management, which handles contaminated sites associated with the legacy of DO E's nuclear energy and weapons production activities. Through projects associated with the Uranium Mill Tailings Radiation Control Act, the DOE remediated 22 sites in Colorado, Wyoming and New Mexico where uranium had been extracted and processed during the 1940s to 1970s.

Uranium was removed from the sites as part of the cleanup process, and the former mines and waste piles were capped more than two decades ago. Remaining uranium deep in the subsurface under the capped waste piles was expected to leave these sites due to natural groundwater flow. However, uranium has persisted at elevated levels in nearby groundwater much longer than predicted by scientific modeling.

In an earlier study, the SLAC team discovered that uranium accumulates in the low-oxygen sediments near one of the waste sites in the upper Colorado River basin. These deposits contain high levels of organic matter-such as plant debris and bacterial communities.

During this latest study, the researchers found the dominant form of uranium in the sediments, known as tetravalent uranium, binds to organic matter and clays in the sediments. This makes it more likely to persist at the sites. The result conflicted with current models used to predict movement and longevity of uranium in sediments, which assumed that it formed an insoluble mineral called uraninite.

Different chemical forms of the element vary widely in how mobile they are-how readily they move around-in water, says Sharon Bone, lead author on the paper and a postdoctoral researcher at SSRL, a DOE Office of Science User Facility.

Since the uranium is bound to organic matter in sediments, it is immobile under certain conditions. Tetravalent uranium may become mobile when the water table drops and oxygen from the air enters spaces in the sediment that were formerly filled with water, particularly if the uranium is bound to organic matter in sediments rather than being stored in insoluble minerals.

"Either you want the uranium to be soluble and completely flushed out by the groundwater, or you just want the uranium to remain in the sediments and stay out of the groundwater," Bone says. "But under fluctuating seasonal conditions, neither happens completely."

This cycling in the aquifer may result in the persistent plumes of uranium contamination found in groundwater, something that wasn't captured by earlier modeling efforts.

"For the most part, uranium contamination has only been looked at in very simple model

systems in laboratories," Bone says. "One big advancement is that we are now looking at uranium in its native environmental form in sediments. These dynamics are complicated, and this research will allow us to make field-relevant modeling predictions."
The study combined the expertise of researchers at SLAC, Pacific Northwest National Laboratory and the Canadian Light Source. The research team used a blend of techniques to analyze samples of sediments in the experiment. They performed X-ray spectroscopy at SSRL to identify the chemical form of uranium. Capabilities at the Canadian Light Source and at the Environmental Molecular Science Laboratory (EMSL) at Pacific Northwest National Laboratory were used to map the locations of the elements in the samples at the nanometer scale. This additional information allowed the researchers to determine whether or not the uranium was bound to carbon-containing, or organic, materials. SSRL and EMSL are DOE Office of Science User Facilities.
The DOE Office of Science funded the project.
SLAC is a multi-program laboratory exploring frontier questions in photon science, astrophysics, particle physics and accelerator research. Located in Menlo Park, Calif., SLAC is operated by Stanford University for the U.S. Department of Energy's Office of Science. For more information, please visit slac,stanford.edu {slac.stanford.edu).
SLAC National Accelerator Laboratory is supported by the Office of Science of the U.S. Department of Energy. The Office of Science is the single largest supporter of basic research in the physical sciences in the United States, and is working to address some of the most pressing challenges of our time. For more information, please visit science.energy.gov (science.energy.gov).
The Bottom Line on Leaky Injection Wells,
ISR/L Recovery and the Stabilization of
Plumes:
If an ISR/L recovery well is contaminated with organic carbon compounds, whether naturally occurring or from leaky underground waste disposals, then the efficiency of recovery of uranium or any other metal by the common ion exchange method will be compromised, and will be rendered unrecoverable.
Moreover, if the organic carbon compounds are stereoisomers, whether naturally occurring or synthetic industry wastes, they will only react with other stereoisomers, so no inorganic method of stabilizing a plume will be effective, as demonstrated at SmithHighland Ranch in WY.
Contaminated old ISR/L field waters may still test high for the elemental presence of uranium, and be marketed and sold (stocks and investments) as having a high propensity for extraction, but that would not be the case. It would not be recoverable. There is no technology known today that will clean up an aquifer like that.
With the impending demise of the EPA, we need
restoration of state oversight, repeal of 58158, and new
(1-1P.lp Us Stop..Ihic::1 ~
(httos://knowminine:.ore:/#oortfolio
laws in place to prevent heavy hazardous waste tankers from destroying our roads and jeopardizing our clean Black Hills environment with accidents and spills on icy roads, hitting deer etc., and causing a permanent dirty bomb forever at these sites. We need laws now that will prohibit the transportation of these radioactive toxic wastes on our roads, through our state, and bringing in other mines' toxic wastes from other states.
Respectfully submitted to the EPA by Linsey Mclean, mclean.linsey@gmail.com
MESSAGE TO THE PUBLIC:
PREPARE FOR THE EPA HEARINGS
1.) Get there early to sign in for your time to present your concerns.
2.) You are most effective if you take the time to write out your understanding of the permit and your objections to it and handing it to the judges. You can save time by reading it aloud to the judges and then submitting the written paper to them for their records. You will have only a short time to speak, so make you comments relevant and pointed. Be sure to sign your name. If you print your comments out on your computer, be sure to sign your name and address at the bottom to make it legal.

3.) Use the science to make your point. Show that you understand the science by explaining why you are against any hazardous waste in our aquifers, whether the lnyan Kara or the Minnelusa, and also why you are against making the lnyan Kara any more compromised than it already is. Both of these aquifers are being used, if not for personal use, then for ag use. Many people with wells in the area, do not even know what aquifer they are in. If you know your well aquifer and it is the lnyan Kara or Minnelusa, you need to make that point.. These judges are scientists and need to hear that you understand and are opposed to this permit. Do Not just get up there and whine about how this doesn't feel good to you. That just gets blown off. Use the studies and scientific points outlined in this document to help you. More if you know more. You only need a couple points to hammer down on.
4.) Encourage your friends and neighbors to get involved and come with you to protect our water.

The Permit in question:

EPA seeks public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota.

Public hearings will be held in Valentine, NE and in Rapid City, Hot Springs and Edgemont, SD.

CONTACT:

Lisa McClain-Vanderpool

(303) 312-6077

mcclain-vanderpool.lisa@eoa.gov

(Denver, Colo. - March 6, 2017) EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. EPA will conduct information sessions combined with public hearings on April 27th and on May 8 through May 11 at the times and locations detailed below. EPA will accept public comments on the draft permits and a proposed aquifer exemption associated with the project through May 19, 2017.

The draft permits issued today include a UIC 'Class 111' Area Permit for injection wells for the in-situ recovery (ISR) of uranium in the lnyan Kara Group aquifers and a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the I nyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class 111 injection well-fields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected.

EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class Ill Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the lnyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur.

Under its obligation to comply with the National Historic Preservation Act and under EPA's Tribal Policy on Consultation and Coordination with Indian Tribes, EPA has been consulting and coordinating with several interested Tribes to identify the potential effects of the proposed project on traditional cultural places, historic and sacred sites. EPA will continue to consult and coordinate with Tribes as necessary throughout the public comment period concerning these proposed permitting actions.

The public is encouraged to provide comment on these draft permits and the aquifer exemption by midnight mountain time, May 19, 2017. EPA's final permit decision will be based on an evaluation of comments received and a determination of whether underground sources of drinking water are protected. The draft permits can be found at the EPA Region 8 UIC Program website:

https://www.epa.gov/uic/uic-epa-region-8 {https://www.epa.gov/uic/uic-epa-region-8l https:llwww.epa.gov/uic/administrative-recorddewey-burdock-class-iii-and-class-v-injectionwell-draft-area-permits /https:llwww.epa.gov/sites/production/files/2017-

03/documents/class v draft area permit fact sheet.pdf)
How to Comment:
Written comments must be received by email, fax or mailed to:
Valois Shea
shea.valois@epa.gov /shea.valois@epa.govl
fax: 303-312-6741
U.S. EPA Region 8 Mail Code: 8WP-SUI
1595 Wynkoop Street
Denver, CO 80202-1129
Public Information Sessions and Hearing Information {The public may also provide written and/or verbal comments during the following EPA public hearings):
Thursday, April 27, 2017 from 4:00 to 8:30 p.m. (with a break from 5:00 to 6:00 p.m.)
Niobrara Lodge, 803 US Highway 20, Valentine, Nebraska 69201
Monday-Tuesday, May 8-9, 2017, 1:00 to 8:00 p.m. (with a break from 5:00 to 6:00 p.m.)
The Best Western Ramkota Hotel, 2111 N. Lacrosse Street, Rapid City, South Dakota 57701
Wednesday, May 10, 2017, from 1:00 to 8:00 pm (with a break from 5:00 to 6:00 p.m.)
The Mueller Center, 801 S 6th Street, Hot Springs, South Dakota 57747
Thursday, May 11, 2017, from 1:00 to 8:00 pm (with a break from 5:00 to 6:00 pm)
St. James Catholic Church, 310 3rd Avenue, Edgemont, South Dakota 57735 from
From the Permit:
Powertech USA submitted an application for a UIC Program Class V Area Permit proposing to construct and operate up to eight (8) deep injection wells within the Dewey-Burdock Project Boundary to be used for the disposal of treated uranium ISR process wastewater into the Minnelusa and Deadwood Formations. At the time the Class V Area Permit Application was submitted, Powertech anticipated that the two (2) Minnelusa and the two (2) Deadwood injection wells proposed in the Class V Permit Application would provide adequate disposal capacity for the Permit SD52173-00000 6 Dewey-Burdock Class V Draft Area Permit Fact Sheet volume of uranium ISR process wastewater that is expected to be generated at the site. As further explained below in Section 2.3, Powertech did not intend to request additional injection wells to be added under the Class V Area Permit unless the first four (4) wells did not provide adequate disposal capacity. However, Powertech withdrew the permitting request for the two Deadwood injections wells in a letter dated December 9, 2016.
This Class V Area Permit authorizes up to four (4) wells for injection into the Minnelusa Formation only. Powertech originally proposed the construction of the two (2) Minnelusa Formation injection wells listed in Table 1, but may elect to construct up to two (2) additional injection wells allowed under this Class V Area Permit. If Powertech decides that more than four (4) injection wells are needed to provide enough capacity to disposed of the treated ISR waste fluids, a modification under this permit will be required per 40 CFR § 144.39 and 40 CFR § 124.5. This process will involve issuing a draft permit modification subject to public comment on the modifications only.
Table 1. Injection Wells Proposed under the Class V Area Permit
- = approximately
1. The approximate depths shown in this table are extrapolated from the type logs described in the Class V Permit Application. Actual injection zone depths will be determined from drill hole logs during well construction.
The Class V Permit Application, including the required information and data necessary to issue a UIC permit in accordance with 40 CFR parts 124, 144, 146 and 147, was reviewed by the EPA and determined to be complete.
This Class V Area Permit is issued for a time period of ten (10) years after the Permit Effective Date and will expire after that time. The Class V Area Permit also may be terminated upon delegation of primary enforcement responsibility for the Class VU IC Program to the State of South Dakota unless the State agency chooses to adopt and enforce this Permit. If Powertech wishes to continue any activity regulated by this Permit after the expiration date of this Class V Area Permit, Powertech must submit a complete application for a new Permit at least 180 days before the Class V Area Permit expires.

2.1 Injection Well Classification
The injection wells authorized under this permit are classified as Class V industrial wastewater injection wells. The proposed injection zone for injection wells DW No. 1 and DW No. 3 is the Minnelusa Formation, which overlies the Madison Formation, a USDW. Typically, Class I radioactive waste injection wells are used for process wastewater disposal at uranium ISR sites because process wastewater at these types of facilities usually meets the definition of "radioactive waste" under 40 CFR § 144.3. Class I radioactive waste disposal wells are required to inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore per 40 CFR § 144.6(a)(3). Radioactive waste disposal above USDWs are classified as Class IV wells and are banned per 40 CFR § 144.13. Because the proposed Minnelusa injection zone for DW No. 1 and DW No. 3 is located above a USDW, these wells do not fit the regulatory definition of a Class I injection well. Therefore, in order to be able to inject in the Minnelusa, above USDWs, the permit requires Powertech to treat the injectate so that it does not fall under the definition of "radioactive waste."
According to 40 CFR § 144.S(e) Permit SD52173-00000 7 Dewey-Burdock Class V Draft Area Permit Fact Sheet:
Well Permit Number: SD52173-08764
Well Name: OW No. 1
Proposed Injection Zone: Minnelusa Formation
Anticipated Injection Zone Depth: -1,615' - -2,205'
Location within Project Area: Burdock
Well Permit Number: 5D52173-08765
Well Name: DW No. 3
Proposed Injection Zone: Minnelusa Formation
Anticipated Injection Zone Depth: -1,950' - -2,540'
Location within Project Area: Dewey
Class V injection wells are those not included in Class I, 11, 111, IV or VI. Therefore, OW No. 1 and OW No. 3 must be classified as Class V injection wells.
Because these two wells will be used as deep disposal wells, the Class V Area Permit contains the protective construction and monitoring requirements designed for Class I injection wells. However, because these wells are Class V wells, the Class V Area Permit contains permit limits requiring injectate constituent concentrations to be at or below radioactive waste standards set in 10 CFR Part 20, Appendix 8, Table 11, Column 2 and hazardous waste standards set in 40 CFR § 261.24 Table 1.
The proposed injection zone for injection wells OW No. 2 and OW No. 4 is the Deadwood Formation, which is expected to lie beneath all USDWs in the area. These two wells fit the regulatory definition of Class I wells found at 40
BOX: (Contribute:)
(https:ljknowmining.org/#portfoliol

CFR § 144.6(a). Even if Powertech treats the injectate for these two wells so that injectate constituent concentrations would be at or below radioactive waste standards set in 10 CFR Part 20, Appendix 8, Table 11, Column 2 and hazardous waste standards set in 40 CFR § 261.24 Table 1, these wells would still meet the definition of Class I other industrial well found at 40 CFR § 144.6(a)(2). South Dakota regulation 74:55:02:02 prohibits Class I injection wells in the State. When the EPA informed Powertech that the OW No. 2 and OW No. 4 wells proposed for injection into Deadwood Formation are classified as Class I wells under UIC regulation 40 CFR § 144.6(a)(2}, Powertech submitted a letter to the EPA withdrawing the request for authorization for construction and operation of wells injecting into the Deadwood Formation. Because there is no longer an active application for injection into the Deadwood Formation, there is no agency action related to injection into this formation.
https:Uwww.epa.gov/sites/production/fl les/2017-03/
documents/class v draft area permit fact sheet.pdf (https://www.epa.gov/sites/production/files/2017-

03/documents/class v draft area permit fact sheet.pdfl
CONTACT US
Tell us what you think.

YOUR NAME*
- -----·----------·--- L:~~~~~L-- . --. --· ---_-~~~~~--- -. ----~ ~. ---------·-·--· --·---·--
YOUR PHONE*
Your Message *
_____)
I'm not a robot
SEND MESSACE
reCAPTCHA
Privacy - Terms
© 2017 2017 Council for Responsible Mining
f
(https://www.facebook.com/knowmining)
Privacy Policy Terms of Use
Ex. 6 Personal Privacy (PP)

RE: Draft permits and aquifer exemption for uranium mining project in southwestern South Dakota
Dear Ms. Shea,
Hello, my name is Ex. 6 Personal Privacy (PP) and attached for your review, please find comments on the proposed policy on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota released by the EPA on March 6, 2017. It is important to take careful consideration into the Underground Injection Control (UIC) proposal before taking action because of the numerous entities that could be potentially impacted. This proposal could be of concern because of the potential risk of contamination of water, disturbances of Indian tribes and their land and detrimental environmental hazards. Underground injections have been a controversial topic for several years because of the potential risks that are entailed. The issuance of two draft Underground Injection Control permits for the allowance of dumping waste from a mining company into a local aquifer is currently under review. I strongly believe the permit should not be approved.
A geological survey of the geohydrology and water quality of the various aquifers in the area was conducted in 1987 and stated that, large amounts of groundwater are from the Inyan Kara, Minnelusa and Madison aquifers in Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming (Kyllonen and Peter, 1987). This proposal focuses on the Inyan Kara, therefore, being that this aquifer is a principle source of ground water in the area, providing permits to move forward with UIC of mining waste could be hazardous to the water quality and the surrounding soils. The possibility for water leaks to occur between aquifers is apparent. This can happen due to numerous reasons including through semi confining layers, wells completed in more than one aquifer and wells with deteriorating casing (Kyllonen and Peter, 1987). Because of this possibility, it poses a risk for the contamination of other surrounding aquifers causing more harm to the environment as a whole. Furthermore, according to the 1987 geological survey of the Inyan Kara aquifer, the principal source of water from the aquifer is used for domestic and livestock supply (Kyllonen and Peter, 1987). In comparison, more recent research shows that the aquifer is still a major source of water for livestock and domestic uses such as drinking water (Powertech (USA) Inc., 2012). Therefore the water from the aquifer is still being used for the same purposes as in 1987. Overall, contamination from the UIC of mining waste can be hazardous to not only the environment but human health as well.
Also, the EPA states that more fluid is extracted than injected in solution mining processes in order to prevent the contamination of drinking water by Class III wells (EPA, 2017a). Therefore, with the Inyan Kara aquifer, there would be more water extracted than there is mining fluid being injected. This would be in attempt to prevent the aquifer from reaching its capacity and contaminating other water sources. However, this statement is very vague and doesn't completely eliminate the risks that could occur from the UIC of the mining waste. Full consideration of the scientific arguments concerning the injections will help provide more reassurance to the safety of the policy. For example, the Interstate Technology Regulatory Council listed several environmental concerns including the alteration of food webs and sediment structure from contamination, impacts on natural biological activity including waste stability. There are also potential negative impacts on animals, marine life and their communities (Interstate Technology Regulatory Council, 2010). The environmental risks that are associated with the UIC of mining waste are substantial enough to reject the permit.
The policy is extremely vague regarding the disturbances of Indian tribes and their land. It is important to include more details on how this topic will be handled and how the policy could impact the tribes. There are various potential impacts of disturbances to the Indian tribes land. Direct impacts to cultural resources are a significant topic that should be discussed in the policy. According to the Tribal Energy and Environmental Information Clearinghouse, increases in human access and disturbances can result in unauthorized removal of artifacts around the site (Tribal Energy and Environmental Information Clearinghouse, 2017). There may also be disturbances to food sources and the Indian tribes water sources ultimately affecting their daily lives.
It is also not stated how the policy and permits for aquifer exemption follows the Clean Water Act regulations and what will be done in order to maintain these regulations. By including this in the policy, it will help prove that the permits are being regulated and abiding by the Clean Water Act. The Clean Water Act establishes a structure for regulating pollution in the waters of the United States (EPA, 2017b). As mentioned above, water leaks are possible, which could ultimately lead to water contamination. Therefore, if there is a risk of contamination of water sources due to the UIC of mining waste with the aquifer, the process could fail to abide by the Clean Water Act ultimately making the proposed policy on draft permits to be reconsidered.
Thank you for the opportunity to provide input on the proposed policy regarding permits for aquifer exemptions of UIC injections of a uranium-mining project in South Dakota. It is encouraged to reconsider the policy proposed for numerous reasons. The disadvantages of the injections outweigh the advantages proving that the injections could be detrimental to all entities involved and so I strongly encourage you to deny these permits.
I look forward to the opportunity to discuss this further. You can reach me at Ex. 6 Personal Privacy (PP)
Cordially,

Ex. 6 Personal Privacy (PP)

Citations:
Environmental Protection Agency (2017a). Class III injections wells for solution mining. Retrieved 26 March 2017, from https://www.epa.gov/uic/class-iii-injection-wells-solution-mining
Environmental Protection Agency (2017b). History of the clean water act. Retrieved 12 April 2017, from https://www.epa.gov/laws-regulations/history-clean-water-act
Interstate Technology Regulatory Council (2010). Backfilling and subaqueous disposal. Retrieved 29 March 2017, from http://www.itrcweb.org/miningwaste-guidance/to_backfilling.htm
Kyllonen, D.P., & Peter, K.D (1987). Geohydrology and water quality of the Inyan Kara, Minnelusa, and Madison aquafers of the northern Black Hill, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming [PDF Document]. Retrieved from https://pubs.usgs.gov/wri/1986/4158/report.pdf
Powertech (USA) Inc. (2012). Dewey-Burdock project report to accompany Inyan Kara water right permit application Custer and Fall River counties, South Dakota [PDF Document]. Retrieved 29 March 2017, from http://denr.sd.gov/powertech/wr/Inyankara/Report/InyanKaraWR_Report.pdf
Tribal Energy and Environmental Information Clearinghouse (2017). Coal: Construction and mining impacts. Retrieved 12 April 2017, from [HYPERLINK "https://teeic.indianaffairs.gov/er/coal/impact/construct/index.htm"]

Ex. 6 Personal Privacy (PP)

RE: Proposed Draft Permits and Aquifer Exemption for Uranium Mining in South Dakota Dear Ms. Shea,
For your review, please find my personal comments on the draft permits and aquifer exemption for uranium mining project in southwestern South Dakota, as proposed by the Environmental Protection Agency on March 6, 2017 (EPA, 2017). This letter will address the background of the situation as well as potential issues that could arise from the uranium injections. Powertech (USA) Inc. is requesting a Class III Area Permit from the EPA for the injection wells for in-situ retrieval of uranium, a Class V Area Permit for deep injection wells to be used to dispose of the necessary process fluids into two aquifers, and approval to be exempt from Safe Drinking Water Act standards within the aquifers (EPA, 2017). I. Background The EPA is contemplating issuing Powertech (USA) Inc. permits to allow uranium waste injection and exempt a portion of the aquifer from the Safe Drinking Water Act in Custer County and Fall River County, South Dakota (EPA, 2017). The drinking water exemption would allow Powertech additional time in order to achieve compliance with regulation (EPA, 2017). Powertech has designed security measures to protect the aquifer, but even though these measures are in place, the risks are too great to grant Powertech the requested permits (EPA, 2017). Allowing these permits would contaminate two aquifers temporarily, as well as risk irreversible uranium contamination, could potentially expose the aquifers and surrounding areas to excursions, and violate the EPA's Safe Drinking Water Act exemption guidelines. The two potential aquifers for injection are the Inyan Kara and Minnelusa Aquifers, which are the main sources of groundwater in the Northern Black Hills of South Dakota and Wyoming as well as Bear Lodge Mountains in Wyoming (Kyllonen & Peters, 1987). Municipalities are the primary users of this water source but both these aquifers are already in danger. The Inyan Kara has surpassed recommended levels of selenium, gross alpha radiation, dissolved solids, iron, manganese, and sulfate (Kyllonen & Peters, 1987). The Minnelusa Aquifer exceeds the recommended and permissible levels of fluoride, dissolved solids, iron, and sulfate (Kyllonen & Peters, 1987). Exposure to additional toxins like uranium will only add to these current unsafe chemical levels, putting people who rely on these aquifers for drinking water at high risk. II. Scientific Issues
As mentioned above, the sources of the various pollutants currently found in the Inyan Kara and Minnelusa Aquifers are not thoroughly understood (Kyllonen & Peters, 1987). Additionally, the interconnectedness between these two aquifers as well as the nearby Madison Aquifer is also uncertain (Kyllonen & Peters, 1987). Because of how unclear the connectivity between these three aquifers is, it would be dangerous to expose two of them to uranium because it could lead to contamination of the unprotected Madison aquifer.
Furthermore, there have historically been numerous problems nation-wide with in-situ uranium leach mines. The Rapid City Journal published an article detailing many complications arising from this practice and sent their list to Powertech to respond on how to prevent these issues (Simmons-Ritchie, 2013). One very similar example is Christensen Ranch in Wyoming. Christensen allows companies to access minerals, oil, and gas beneath the ranch. The EPA granted a permit that now allows 200,000 gallons of toxic waste from uranium mining to be pumped into aquifers under Christensen Ranch every day (Lustgarten, Dec. 11, 2012). Now, the aquifer has uranium levels more than 70 times greater the maximum limits (Lustgarten, Dec. 11, 2012). This aquifer could have provided an immense source of drinking water but is now so contaminated it may never be able to be used for that purpose.

Additionally, aquifers are frequently worse off after mining. Often times, the water is not restored to the pre-mining contaminant level (Lustgarten, Dec. 11, 2012). The Nuclear Regulatory Commission has even declared areas as restored even if contaminants within the aquifer are above natural levels (Lustgarten, Dec. 11, 2012). In a U.S. Geological Survey study, zero out of elven sites in the state of Texas had been completely resorted to pre-mining contaminant levels (Lustgarten, Dec. 112012). In the past 30 years, the EPA has granted over 1,500 permits to exempt companies from complying with the Safe Drinking Water Act (Lustgarten, Dec. 11 2012). It is clear that effective clean-up to restore aquifers is not occurring which puts the Inyan Kara and Minnelusa aquifer in danger during and after this project. Powertech's response addressing these concerns greatly justified the design of the project, which includes measures to prevent the excursions of toxins (Simmons-Ritchie, 2013). An excursion occurs when water quality exceeds limits established in a license and is often a precursor to a wellfield, the land above wells that is drilled into the aquifer, imbalance (Marion County, 2017). Even though many preemptive measures are employed, if an excursion were to occur, Powertech's system is made to quickly detect and stop the excursion so it would not be able to infiltrate the groundwater (Simmons-Ritchie, 2013). A trained operator will also monitor the station 24 hours a day (Simmons-Ritchie, 2013). Additionally, the company is obligated to report the discharge of any chemicals to the Department of Environmental Quality within 24 hours of the spill (Simmons-Ritchie, 2013).

While these regulations and precautionary measures are ideal, there is still a risk associated with uranium injection. A majority of past complications at injection sites in South Dakota involved spills of injection fluids, broken pipes, or excursions of process fluid beyond production zone limits (Source 6). While Powertech has worked to make this site as safe as possible, uranium injection cannot be guaranteed to be safe and without errors. If a spill were to occur, it would not be contained to the protected area and could infiltrate the ground and groundwater outside the project boundary. This risk puts the people of South Dakota in danger by jeopardizing their right to safe drinking water.

III. Legal Issues An investigation by Pro Publica deemed that allowing permitting to allow chemical injections and Safe Drinking Water Act exemptions conflicts with the EPA's mandate to protect drinking water (Lustgarten, Dec. 11, 2012). Legally, the EPA is only permitted to grant exemptions to aquifers that are unable to supply drinking water because they are too remote, unclean, or deep (Lustgarten, Dec. 11, 2012). This permit would violate these requirements because the Inyan Kara and Minnelusa Aquifers do not fit the given conditions to be unfit for drinking water. IV. Conclusion I greatly appreciate your willingness to review public comments on the draft permits and aquifer exemption for the uranium mining project in southwestern South Dakota. I encourage you to strongly consider the risks uranium injection poses to the affected aquifers. Exemptions on policies like this make laws less stringent and could set a precedent for future miners. Since the late 1980s, the EPA has permitted energy and mining operations to pollute portions of more than 100 aquifers of drinking water (EPA, N.d.). The Safe Drinking Water Act is in place to protect United States' citizens from ingesting harmful substances and no exemption should be permitted to compromise that, as it is clear that even after "clean-up," there is the potential for lasting contamination. Thank you for your consideration.

Cordially, Ex. 6 Personal Privacy (PP)

References

EPA seeks public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota. (Mar. 06, 2017). Environmental Protection Agency. Retrieved from https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemption-uranium-mining-project

In Situ Leach Mining Rules Question and Answer Sheet. (N.d.). South Dakota Department of Environment and Natural Resources. Retrieved from http://denr.sd.gov/powertech/UraniumQuestion&AnswerSheet92508.pdf

Kyllonen, David P. and Kathy D. Peter. (1987). Geohydrology and Water Quality of the Inyan Kara, Minnelusa, and Madison Aquifers of the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming. U.S. Geological Survey. Retrieved from https://pubs.usgs.gov/wri/1986/4158/report.pdf

Lustgarten, Abrahm. (Dec. 26 2012). Christensen Ranch's Uranium Mining Throws Safe Drinking Water Act Exemptions Into The Spotlight. The Huffington Post. Retrieved from http://www.huffingtonpost.com/2012/12/26/christensen-ranch-uranium-water-supply_n_2366333.html

Lustgarten, Abram. (Dec. 11 2012). Poisoning the Well: How the Feds Let Industry Pollute the Nation's Underground Water Supply. Pro Publica. Retrieved from https://www.propublica.org/article/poisoning-the-well-how-the-feds-let-industry-pollute-the-nations-undergroun

Simmons-Ritchie, Daniel. (Sept. 20 2013). Powertech response to issues at in situ leach uranium mines. Rapid City Journal. Retrieved from http://rapidcityjournal.com/uranium/powertech-response-to-issues-at-in-situ-leach-uranium-mines/article_b6cc7675-3544-5fd7-b9d7-cb8b92a31534.html

Variances and Exemptions. (N.d.). Environmental Protection Agency. Retrieved from https://www.epa.gov/dwreginfo/variances-and-exemptions

Wellfield FAQS. (2017). Marion County Wellfield Education Corporation. Retrieved from http://indyh2o.org/wellfields/

Ex. 6 Personal Privacy (PP)

My name is Ex. 6 Personal Privacy (PP) nd I am a graduating senior from James Madison University. Attached in this email is a comment I have written in regards to the Dewey-Burdock Injection Well Permits. Thank you for you consideration.
Sincerely, Ex. 6 Personal Privacy (PP)

My name is Ex. 6 Personal Privacy (PP) and I am a graduating senior from James Madison University. Attached in this email is a comment I have written in regards to the Dewey-Burdock Injection Well Permits. Thank you for you consideration.
Sincerely, Ex. 6 Personal Privacy (PP)

Re: Public Notice: Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

The following comment provided is for your consideration toward the Proposed Dewey-Burdock Class III and Class V Injection Well Draft Area Permits by the end of the comment period, on May 19, 2017. The permits in question are Permit No. SD31231-00000 for the aquifer exemption decision, Permit No. SD31231-00000 for the class III injection well permit, and Permit No. SD52173-00000 for the class V injection well permit. My name is Ex. 6 Personal Privacy (PP) and I am a senior at James Madison University in Harrisonburg, Virginia. I am currently studying Integrated Science and Technology, with a focus on environmental science. As a person who cares deeply about the protection of the environment, I have written a response to the UIC permits under consideration.

Introduction

Water is one of the most important and valuable resources on the planet. Water is the source of all life on earth and it needs constant protection. The Safe Drinking Water Act (SDWA), from the EPA, legally protects drinking water in the United States. This act led to the creation of the Underground Injection Control (UIC) program as a response to growing needs for underground injection of potentially dangerous materials and the extraction of materials from underground. According to the EPA, a class III injection well is a "well used to inject fluids for the extraction of minerals" and a class V injection well is a "well not included in the other classes used to generally inject non-hazardous fluid into or above an underground source of drinking water (USDW)" (Injection Wells, 1989).

Overview of Position

The class III permit is a request to create wells that would be used for the recovery of uranium from underground (Dewey-Burdockb, 2016). This permit should not be granted in order to project the Inyan Kara aquifers that are located where the wells would be placed (Dewey-Burdockb , 2016). The placement of these wells put the aquifers at risk of contamination from a number of possibilities that are associated with in-situ recovery. Some of the risks include groundwater contamination, leakage of chemicals, contamination of local drinking water sources, etc. (Lustgarten, 2012). The class V permit is a request to inject waste fluids into the ground after proper treatment (Dewey-Burdocka, 2016). This should also not be permitted in order to protect the Minnelusa Formation, located below the Inyan Kara aquifers. For similar reasons to reject the class III permit, the class V permit should be rejected as well. The risk of groundwater contamination, of which groundwater is the primary source of drinking water within this area, puts the people living among the Inyan Kara aquifers at risk of consuming polluted water (Kyllonen & Peter, 1987). Any amount of pollution to the aquifers would cost a heavy price to remediate, if remediation could be possible at all (Management of Remediation Waste Under RCRA, 1998 October 14).

Research of Position

The creation of wells in general requires copious amounts of labor, materials, and time (Injection Wells, 1989). All of this would be for the creation of wells that could potentially harm the environment and human health. Allowing Powertech Inc. to create these wells would not only put the environment at risk, but it would also continue our world's dependence on removing and injecting materials form earth. The United States is one of the top nations that contributes to copious amounts of drilling into the planet. With the current administration, this is likely to increase in the next few years. An article from The Virginia Pilot talks about a study conducted by The National Research Council of the National Academy of Sciences on the dangers of uranium mining. Specifically, the article talks about how research has found increasing activities of this type, near bodies of water that serve as sources of drinking water, often results in increased risk for contamination (Bartel, 2011). Powertech Inc. is requesting permits for well sites located within the area containing the Inyan Kara aquifers. These aquifers are the primary sources of drinking water for the "northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming" (Kyllonen & Peter, 1987). For the safety and health of U.S. citizens and the environment, injection wells should not be allowed in this area.

The Underground Injection Control (UIC) program was created under the Safe Drinking Water Act (SDWA) for the application of safe injection wells that cause as little damage as possible to the environment and human health. However, the creation and use of injection wells innately contain high risks that may not be worth the reward. In the instance of this situation, the people of the Inyan Kara aquifers would be the ones that are being put at risk (Lustgarten, 2012). The health

of their drinking water supply is directly impacted by the proposed permits of Powertech Inc. The impacts of these permits include the potential contamination of groundwater from leaks, contamination of surrounding subsurface and surface soil from leaks, and contamination of drinking water sources (Lustgarten, 2012). Even in conjunction with regulations under the SDWA, there are many inherent and potential risks associated with injection wells. Along with discouraging this type of activity, rejecting these permits would ensure the safety of the environment and the people of Wyoming and South Dakota (Injection Wells, 1989).

Conclusion

As a senior Integrated Science and Technology major at James Madison University, I believe that both the class III and class V permits should be rejected by the EPA. The specific focus of my major is on the environment, but in general my major is an interdisciplinary study that includes manufacturing. From an economic perspective, these wells would provide a great profit for Powertech Inc., but this would come at a high environmental price. Furthermore, these wells present the possibility of contaminating the groundwater from the underlying aquifers. If contaminants were able to get into these aquifers, it would be a heavy price to clean it up, if it could be cleaned up at all (Injection Wells, 1989). It is a human right to have access to clean, safe drinking water and accepting these permits would potentially inhibit that right. In this situation, I believe that the risk is not justified by the reward. The EPA should reject these permits from Powertech Inc. in order to protect the environment and the U.S. citizens that live in the area of concern. If you have any questions or responses to this contact, please do not hesitate to contact me. My email address is rafternm@dukes.jmu.edu. I look forward to seeing the EPA's decision on this matter after the comment review period.

Sincerely, Ex. 6 Personal Privacy (PP)

Sources

Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits. (2017, March 06). Retrieved March 23, 2017

Bartel, B. (2011, December 20). Uranium mining report finds risks, benefits for Virginia. Retrieved March 26, 2017

Dewey-Burdocka. Draft Aquifer Exemption Record of Decision. (2013). Retrieved March 27, 2017

Dewey-Burdockb. Class III Draft Area Permit Documents. (2017, March 06). Retrieved March 23, 2017

Dewey-Burdock Class V Deep Disposal Injection Well Area Permit. (2017, March 06). Retrieved March 23, 2017

Goodell, J. (2016, December 09). Trump's EPA Pick Is the Fossil-Fuel Industry's Con Man. Retrieved March 26, 2017

Injection Wells: An Introduction to their Use, Operation, and Regulation. (1989). Retrieved March 26, 2017

Kyllonen, D. P., & Peter, K. D. (1987). Geohydrology and Water Quality of the Inyan Kara, Minnelusa, and Madison Aquifers of the Northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming. Retrieved March 23, 2017

Lustgarten, A. (2012, September 19). Injection Wells: The Poison Beneath Us. Retrieved March 28, 2017

Management of Remediation Waste Under RCRA. (1998, October 14). Retrieved March 28, 2017.

Ex. 6 Personal Privacy (PP)

Attached is my comment letter for submission in regard to the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits.

Thank you, Ex. 6 Personal Privacy (PP) James Madison University

Attached for your review, please find comments on the EPA Region 8 UIC Program is issuing two Draft UIC Area Permits to Powertech (USA) Inc., Suite #140, 5575 Denver Technical Center Parkway, Greenwood Village, Colorado 80111, for injection activities related to uranium recovery.

Many know the Black Hills region of South Dakota as Mount Rushmore, but these mountains are endangered. Currently, the U.S Environmental Protection Agency (EPA) has publicized two Underground Injection Control (UIC) Area permits to company Powertech (EPA, 2017). The two pending permits that will be under review both endanger the purity of the aquifers in these mountains. The first permit is a UIC 'Class III' which would allow injection wells for the in-situ recover (ISR) of uranium in the Inyan Kara Group aquafers (EPA, 2017). In order to ensure the safety of drinking water sources, the aquifer will be monitored of before and after ISR operations (EPA 2017).

The second permit that the EPA is suggested that there would be an exemption for the aquafer. Meaning that this exemption would exclude uranium-bearing portions of the Inyan Kara Group aquifers from abided the Safe Drinking Water Act (EPA, 2017). In order for this any ISR activities to occur this exemption must be in place. The second permit is a UIC 'Class V' Area Permit for deep injection wells where the dispose of ISR process waste fluids into the Minnelusa Formations below the Inyan Kara after treatment (EPA, 2017). In addition, for the 'Class V' permit, the water being injected back into that aquafer must abided by all radioactive waste and hazardous waste standards set by the Clean Water Act (CWA) and National Pollution Discharge Elimination System (NPDES). These two permits should not be passed due to the dangers associated it with UIC.

These permits should not be passed because for many years U.S industries have been under a misconception that underground injections have not been harming the inner core of the United States, when actually they have had extreme damages from disposes and allowing these toxins underground. Over the last few decades U.S companies have injected more than 30 trillion gallons of toxic liquid into the earth (Lustgarten, 2012). The invisible natural resources of the United States are have now become their "invisible dumping grounds" (Lustgarten, 2012). The sad part is many companies have gotten away with toxin disposal for the sheer reason that it has been underground.

If these toxins were being disposed of above ground it would be a whole different story, or even not allowed at all. A question that policy makers should be asking is if companies were to inject or dispose of these toxins above the ground what would it look like? Would people be okay with it like they are okay with underground waste? Prior to a few years ago environmentalists and scientists didn't realize that deep layers of rock would not be able to handle these toxins as they thought especially in years to come.

These two proposed permits are not by any means perfect. These two permits have problems associated with them because of the dangers uranium in water can have. Most people wouldn't drink bottled water or "purified water" if they knew it contained uranium or even nitrates. There are already two aquifers in the United States that contain uranium levels that exceed the U.S EPA maximum containment level (MCL) (Tasch, 2015). These aquifers are supposed to be proving clean water to almost 6 million people, with 2 million living nearly less than a mile from these aquifers (Tasch, 2015). It has been proven by the EPA and scientists that drinking high levels of uranium in which exceed EPA standards can lead to increased risks for cancer, liver damages, and reproductive complications (Tasch, 2015). These two aquifers are in the High Plains and Center Valley (Tasch, 2015).

The High Plains aquifer is the largest in the United States spanning in over eight states but is also very contaminated with uranium (Tash, 2015). The High Plains aquifer exceeds the EPA's MCL limit for uranium by 89 times, but it is also contaminated with nitrate levels that fall at 189 times the EPA's MCL (Tasch, 2015). Then the second aquifer is in Center Valley where the contamination level is even higher with uranium concentrations 180 times the MCL and nitrate concentration levels 34 times the MCL (Tasch, 2015). Science has proven that uranium and nitrate intake for humans as said above can pose many health problems.

At a legal standpoint looking at both permits purposed they can violate the terms of the Safe Drinking Water Act, CWA, and various of water acts that are put into place to ensure quality drinking water. Mainly though, these permits would allow for a loop holes for the Black Hills region to not have to abided by. If these permits are adopted it can infect and pose health problems to those living around the aquifers. Sometimes violations of these acts can be criminalized, or most companies face many heavy fines.

This March, the EPA issued these two draft Underground Injection Control Permits. These two permits have the ability to change how we consider dumping mining waste throughout the rest of the current Trump administration, or for far longer than the next four years. These permits do not only have the potential to further have a negative impact on health, but also on the limitations of drinking water. A population of concern is the indigenous people who live near these aquifers. It is important to not allow these permits to be put into place not only for the safety of drinking water quality but also because people depend on the natural underground water supply.

Sources

Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits. (2017, March 06). Retrieved March 23, 2017, from https://www.epa.gov/uic/administrative-record-dewey-burdock-class-iii-and-class-v-injection-well-draft-area-permits

Lustgarten, A. (2012, September 19). Injection Wells: The Poison Beneath Us. Retrieved March 23, 2017, from https://www.propublica.org/article/injection-wells-the-poison-beneath-us/single#republish

Safe Drinking Water Act (SDWA). (2017, January 12). Retrieved March 23, 2017, from https://www.epa.gov/sdwa

Tasch, B. (2015, August 18). 6 million U.S. residents are drinking uranium-contaminated water that could increase risk of liver damage. Retrieved March 23, 2017, from [HYPERLINK "http://www.businessinsider.com/high-uranium-levels-of-drinking-water-in-the-central-us-2015-8"]

Ex. 6 Personal Privacy (PP)

Attached is my comment regarding the proposed Uranium mining operation in the Black Hills of South Dakota. Thank you for the opportunity for public comment. Sincerely, Ex. 6 Personal Privacy (PP)

To whom it may concern,

1. Background

From this time until May 19th, the United States Environmental Protection Agency (EPA) is calling for public comments regarding a hot topic issue in the state of South Dakota. The small town of Edgemont, South Dakota is currently at the center of an environmental deal between the US company PowerTech and the EPA that consists of permitting the company to conduct an in situ uranium recovery project that is located roughly 13 miles northwest of the

town. This recovery site is located on the southwestern edge of the Black Hills, a wild horse sanctuary established roughly 20 east of Edgemont. In 2015 the EPA determined that the cleanup of these sites, the Darrow, Triangle, and Freezeout mines, was not required. While the EPA may have sampled upstream and downstream of the site in question, they were criticised for their ruling because testing within the actual mine sites was not conducted due to the fact that site assessors were unable to gain private landowners permission to access the sites. While this is not entirely the fault of the EPA, the conclusions drawn from their testing ultimately do not reflect the real life exposure and contamination potential and therefore should not be fully accepted. In addition, these assessments do not take into consideration large soil and mine-waste piles or possible runoff potential from the mine pits. Due to sampling conducted downstream that did not exceed healthy concentration levels, the epa was not able to document an occurrence of a release, however large gaps in preliminary site testing leaves a large amount of uncertainty to be accounted for.

2. Overview of proposed action

This action by the EPA would allow Powertech to conduct in situ recovery mining that utilizes a series of wells to inject groundwater enriched with oxygen and baking soda into the uranium ore area. By doing so, the mixture dissolves the uranium ore and is then drawn out by a pump and sent to a processing plant. Once at the plant, the uranium can be removed using ion exchange techniques, while the leftover water is refortified with oxygen and baking soda again. By doing so, Powertech is able to create a sustainable extraction method that reuses the injected groundwater. This process eliminates the need for mining machines, open pits, mine waste, mine shafts, and mine workers who previously have been required to use explosives in previous extraction methods. From their purchase and surveying of the 11,000 acres Powertech bought in 2005, the company has reported an estimated 11 million pounds of recoverable uranium that would take over two decades to fully recover. The site itself has a few key natural characteristics that have prevented the uranium from contaminating further including good geological confinement and natural upward groundwater gradients that prevents dissolved uranium and mining solutions from traveling down the water gradient. In addition, engineering controls will be established including well field design and the implementation of monitoring wells that measure groundwater levels and water chemistry. Finally, the operation will implement a technique known as bleed pressure which creates a pressure gradient in the injection process that causes the groundwater to flow towards the production wells, ensuring as much of the treatment water is recovered. Powertech has determined they will need roughly 190 employees for the operation and has estimated a rough investment of $51 million dollars. Once the operation is complete, Powertech has stated that all wells will be sealed/capped, pipelines and process facilities will be removed, and the site will be re-vegetated. Finally, freshwater will be pumped through the aquifer to ensure it is restored to NRC standards.

3. Personal opinion of proposed action

While taking all of the previous information into consideration, including the various technological controls, natural site features, and established plans of process and cleanup, I believe this operation has the potential to be a disastrous environmental catastrophe. Given the various technological failures that have occurred over the years, such as chemical plant explosions or the water contamination in Flint, Michigan, the most extreme consequences must be taken into consideration. These operations are highly digitalized and rely on a variety of different technological controls in order for the system to function properly without any unintentional runoff or seepage to occur. These processes are so streamlined and integrated that a single issue process could prove catastrophic to the community of Edgemont. For example, a chemical plant in the United States had a buildup of gases in a chemical reserve tank that caused in a backflow of chemicals into the system that resulted in a destructive explosion. This explosion destroyed most of the plant and resulted in one of the largest death counts from an industrial accident in recent years. These situations are thankfully not frequent occurrences, however a proper risk assessment must take into consideration both the probability and the impact of the consequences regardless of their assumed probability.

4. Consideration of legal and cultural impacts

In addition to the possibility of technology failure, the cultural significance to the area must also be taken into consideration. The Black Hills have been home the The Lakota, or the Sioux tribe, for generations. Because of this, the EPA is required to comply with the National Historic Preservation Act under the EPA's Tribal Policy on Consultation and Coordination with Indian Tribes. These people have been interested in the potential outcomes of the Powertech operation, and as such have requested the EPA provide them with a concise and well researched identification of potential effects of the proposed project. These are historic and sacred lands, and as such the EPA continues to provide the tribe with as much information as possible, however these potential cultural impacts must be weighed against the benefits.

5. Consideration of scientific argument

In addition to the cultural consequences, the scientific ramifications of the project must be taken into consideration. While research and modeling has determined that the flow rates between the 3 Black Hills aquifers is minimal, flow between aquifers ultimately occurs. While this flow rate has been deemed minimal a technological control failure could result in the tribe being exposed to an extremely dangerous radioactive material that has serious health implications associated with both short term and long term exposure. The EPA has drafted permits for Powertech that

include a UIC 'Class III' Area Permit for injection wells for the in situ recovery of uranium in the Inyan Kara Group aquifers, as well as a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of recovery process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. These terms establish treatment requirements for the waste encompassed under the 'Class V" Area Permit that must meet all radioactive waste and hazardous waste standards. In addition, the permits establish monitoring of the sites prior, during, and after the operation to ensure concise data records of the process. Finally, the EPA is also considering an aquifer exemption rule for Powertech in combination with the UIC 'Class III' Area Permit. This would exempt Powertech from complying with the Safe Drinking Water Act in all uranium-bearing portions of the Inyan Kara Group aquifer. While it has been determined that water flow out of and between the aquifers is minimal, omitting a key step in the cleanup process is a counterproductive decisions of which the consequences must be taken into consideration.

6. Conclusion

Thank you for the opportunity to provide input on the proposed aquifer exemption for uranium mining waste issue. These environmental issues are things that many citizens of this country must deal with in their everyday lives, and unfortunately will be present for future generations to deal with. The long term time frame and scale of the consequences that could from technological control failure, corporate negligence, and natural leakages must be taken into consideration when determining whether or not to approve this project. WIth the information provided, it only makes sense to discourage potentially dangerous operations such as these, and it is my hope that I have convinced you to take into consideration a perspective you may not share.

Cordially,

Ex. 6 Personal Privacy (PP)

James Madison University ISAT Senior

7. References

Thares, Paul. "Proposed Powertech (USA) Dewey-Burdock In Situ Recovery Uranium Mine Project". iGrow | SDSU Extension. N.p., 2017. Web. 30 Mar. 2017.

"EPA: Cleanup Not Required At Uranium Mines Near Edgemont". KELOLAND News. N.p., 2017. Web. 30 Mar. 2017.

"Public Notice: Administrative Record For The Dewey-Burdock Class III And Class V Injection Well Draft Area Permits | Protecting Underground Sources Of Drinking Water From Underground Injection (UIC) | US EPA". Epa.gov. N.p., 2017. Web. 30 Mar. 2017.

Kyllonen, David, and Kathy Peter. "GEOHYDROLOGY AND WATER QUALITY OF THE INYAN KARA, MINNELUSA, AND MADISON AQUIFERS OF THE NORTHERN BLACK HILLS, SOUTH DAKOTA AND WYOMING, AND BEAR LODGE MOUNTAINS, WYOMING". www.usgs.gov. N.p., 2017. Web. 30 Mar. 2017.

"EPA Seeks Public Comment On Draft Permits And Aquifer Exemption For Uranium Mining Project In Southwestern South Dakota | U.S. EPA News Releases | US EPA". Epa.gov. N.p., 2017. Web. 30 Mar. 2017.

Ex. 6 Personal Privacy (PP)

I am a senior Geographic Science student at James Madison University and I have attached my comment letter for the South Dakota draft permits and aquifer exemption.

RE: Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

My name is Ex. 6 Personal Privacy (PP) and I am an undergraduate student at James Madison University. Attached is my statement on the Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits, released by the U.S. Environmental Protection Agency on March 6, 2017.

I. Background

The Inyan Kara Group aquifers are located in the Black Hills of South Dakota which is composed of the Inyan Kara, Madison, and Minnelusa aquifers (Kyllonen, 1987). These aquifers are regenerated by the infiltration of rainfall into the ground, while water from these aquifers is released from well extractions as well as natural springs. Water in all three of the aquifers in the Inyan Kara Group require some kind of treatment before either public use or irrigation (Kyllonen, 1987). Some substances requiring treatment include: gross alpha radiation, iron, manganese, sulfate, hardness, sodium, bicarbonate, and fluoride (Kyllonen, 1987). Within the Inyan Kara Group aquifers, contain rocks that have uranium in them. This uranium is then naturally dissolved over time, producing dissolved uranium and radium-226 within the aquifers (Kyllonen, 1987).

II. Overview of Proposed Action

The U.S. Environmental Protection Agency (EPA) has drafted two Underground Injection Control (UIC) Area Permits for Powertech (USA) Inc. These drafted permits are for

"UIC 'Class III' Area Permit for injection wells for the in-situ recovery (ISR) of uranium in the Inyan Kara Group aquifers and a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class III injection wellfields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected" (McClain-Vanderpool, 2017).

III. Position

My position on this issue is in opposition of allowing there to be any kind of in-situ underground injection of uranium and uranium wastes. Injecting waste from uranium, which is radioactive and horrible for human health cannot be a good idea (Kyllonen, 1987). Even if the water is treated and has to be tested before, during, and after the mining, radioactive materials within a water supply is still potentially harmful to the environment (Mudd, 2011). There are past instances where such actions were detrimental to the environment and natural restoration of the impacted groundwater was questionable, leaving areas of contaminated groundwater within the confines of the mining area and gradually flowing down the slope of the gradient within the aquifer (Mudd, 2001).

IV. Scientific Arguments

In situ uranium extraction has become more and more common in recent years in regions that include the United States, Europe, and Russia; while being tested in Australia (Mudd, 2001). In the United States, Nine Mile Lake, Wyoming and Reno Ranch, Wyoming were both used as trials of in situ uranium recovery (Mudd, 2011). At Reno Ranch, uranium recovery was cut short due to problems with well circulation and uranium recovery rates (Mudd, 2001). The mining halted and restoration processes commenced directly after, immediately treating the groundwater. At both sites, restoration efforts were very expensive and were revealed to not be cost-effective when compared to more traditional uranium recovery methods. In terms of monitoring the groundwater after restoration efforts, contaminants were discovered to be moving down slope at the Nine Mile Lake location (Mudd, 2001). Overall, in situ uranium mining in the United States experienced problems with wells plugging up, as well as increasing the levels of salinity, sulfate, and radionuclides within the surrounding groundwater, causing a decrease in the overall water quality when compared to the water quality before mining commenced. Along with this, there was no evidence of natural reduction of the pollutants in post-restoration monitoring (Mudd, 2001). There is a policy in place that was created in 1995 that creates standards relating to the protection of public safety, health, and the environment in regards to uranium processing (Radiation Protection).

V. Policies Involved

One policy that would be effected by the mining for uranium in the Inyan Kara Group aquifers would be the Safe Drinking Water Act (McClain-Vanderpool, 2017). But, if the proposed UIC Class III Area permit would be put into place, then the aquifers in the Inyan Kara Group would be exempt from the provisions in the Safe Drinking Water Act (McClain-Vanderpool, 2017). If the EPA were to not consult and coordinate with tribes during the public comment period, then they would be in violation of the National Historic Preservation Act and the Tribal Policy on Consultation and Coordination with Indian Tribes; but EPA has been involving the tribes throughout the process (McClain-Vanderpool, 2017).

VI. Conclusion

My opposition to the Class III and Class V Underground Injection Control Area Permits for the Inyan Kara Group aquifers stems from scientific studies of previous in situ uranium recovery projects. Although the waste created from the mining process is treated before it is injected into the groundwater, it has been shown that water quality is often worse than before the mining began. Increased levels of salinity, sulfate, and radionuclides have been observed in the areas of extraction, after restoration took place. Natural processes have not been proven to be effective in reducing the amount of uranium within groundwater (Mudd, 2001). Mining companies are unable to fully clean up the mess that they made, leaving the water and environment a dirtier and less safe place to live in.

Cordially,

Ex. 6 Personal Privacy (PP)
Geographic Science Student
James Madison University

RE: the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

Dear Ms./Mrs. Shea,

My name is Ex. 6 Personal Privacy (PP) nd below you can find my comments on the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits. On paper, the Dewey Burdock project seems like a reasonable idea that could create potential benefits for particular groups of individuals, but not the common good. This Dewey-Burdock project is a multi-

faceted issue that can threaten the environment and groundwater, take control of tribally significant lands, and create an unnecessary potential for an accident.

The EPA should not move forward with the Underground Injection Control permits and exemptions for the Dewey-Burdock site. The potential costs and consequences that could arise from this project are simply not worth the benefits it claims to produce. It seems that groundwater continues to pop up as a reoccurring theme that can be found at the center of many environmental conflicts these days. Especially, as climate change continues to advance and makes issues such as drought more prominent; water (particularly potable groundwater) has become a valuable resource that shouldn't be compromised. Surface water continues to be polluted, rain is becoming more infrequent and unreliable as a source of drinking water (particularly in arid regions), and this has created a further need for these groundwater sources and reserves. Ex. 6 Personal Privacy (PP)

Native Americans have been consistently exploited in our nation and have had sacred lands taken from them to allow for the extraction of resources too many times. The Dewey-Burdock project would continue and encourage this trend, whether it is intentional or not. Uranium mining and the technologies associated with this process also create a danger and risks for an accident or mistake to be made along the way. A lot can go wrong, particularly when injecting wastewater from uranium mining back down into aquifers. There are preventative measures put into place to avoid and deal with accidents, but when it comes down to it, there is no way to guarantee safety.

There are issues that arise when evaluating the safety and potential consequences of tampering with uranium, especially within/close to these aquifers. One major concern is that these deep injection wells are supposed to place this wastewater into the Minnelusa Formation where it will hopefully continue to remain and prevent any harm, but the threat is still there (EPAa, 2016). The water isn't guaranteed to stay within the Minnelusa Formation as the USGS has identified that, "Fracturing from folding and brecciation near the outcrop may have increased the permeability of the lower part of the Minnelusa a considerable, but unknown, amount" (Kyllonen, D. P., & Peter, K. D., 1987). This is obviously concerning to know that this wastewater may not remain within the Minnelusa Formation and permeate through, especially considering how many other aquifers are in the surrounding areas. It even states on EPA's UIC website that, "This disposal can pose a threat to ground water quality if not managed properly," and "The different types of Class V wells pose various threats" (EPAa, 2016). While precautionary measures can be taken, there is absolutely no guarantee that Powertech will be able to properly manage and avoid potential accidents/threats from occurring.

In regards to legal discrepancies, there seems to be many that are associated with this project. The fact that an exemption from the Safe Water Drinking Act is needed to proceed with this uranium extraction says a lot in itself (EPA, 2016). This Safe Drinking Water Act was enacted to protect our nation's potable water sources, and therefore, should continue to do this instead of allowing exemptions that compromise the safety of the water within these aquifers. Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)

When considering the wellbeing and interests of Native American tribes, the Dewey-Burdock project oversteps onto the rights and important lands that these tribes cherish. There are still plenty of agreements that must, but may not be reached with these tribes and as the Nuclear Regulatory Commission states, "The NRC identified 23 Native American tribes that attach historical, cultural, and religious significance to sites within the Dewey-Burdock ISR Project area" (NRC, 2014). Twenty-three is a very large number and they should all have a voice that is heard and acknowledged by our democratic system to prevent this project from occurring. The value of historic land and loss of culture cannot be made up with money. Ex. 6 Personal Privacy (PP)

The Dewey-Burdock project is not a reasonable investment to move forward with because of all the different issues and threats that it creates. Red flags continued to appear the further I researched these plans to allow ISL uranium mining, and the implications that would arise as a result. Groundwater is a resource that should be conserved instead of wasted to allow for mining and the storage of the wastewater afterwards. Significant Native American lands should be respected and left alone especially when the degradation of it is a certain consequence. Lastly, accidents happen all the time and there is no precaution that can exempt this project from failures and the detrimental consequences that would be afflicted. The cons discreetly but surely arise in regards to this project, and it seems like an obvious decision to abandon this project and not allow the permits & exemptions that are needed to progress.

Contact info:

Ex. 6 Personal Privacy (PP) Harrisonburg, VA, 22801
PERLINK "mailto:clarkejt@dukes.jmu.edu"] Cordially, Ex. 6 Personal Privacy (PP)

Works Cited

EPA (2017). Class III Injection Wells for Solution Mining. (2016, November 07). Retrieved March 27, 2017, from [HYPERLINK "https://www.epa.gov/uic/class-iii-injection-wells-solution-mining"]

EPAa (2017). Class V Wells for Injection of Non-Hazardous Fluids into or Above Underground Sources of Drinking Water. (2016, October 31). Retrieved March 28, 2017, from [HYPERLINK "https://www.epa.gov/uic/class-v-wells-injection-non-hazardous-fluids-or-above-underground-sources-drinking-water"]
NRC (2014). *Environmental impact statement for the Dewey-Burdock Project in Custer and Fall River Counties, South Dakota: supplement to the generic environmental impact statement for in-situ leach uranium milling facilities, final report*. Washington, D.C.: United States Nuclear Regulatory Commission, Office of Federal and State Materials and Environmental Management Programs. Retrieved March 28, 2017 from [HYPERLINK "https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1910/s4/v1/"]
Kyllonen, D. P., & Peter, K. D. (1987). *Geohydrology and water quality of the Inyan Kara, Minnelusa, and Madison aquifers of the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming* (pp. 1-58) (United States, U.S. Geological Survey, Department of Interior). Rapid City, SD: Dept. of the Interior, U.S. Geological Survey.

To: The Environmental Protection Agency
From: Ex. 6 Personal Privacy (PP)
Re: Azarga plan for deep well injection
Please include the following to your comments about the Deep Well Injection. Thank you.
There are many reasons why the EPA should deny Azarga any permit to mine uranium and/or inject toxic fluids into currently used aquifers in the Dewey Burdock area of South Dakota. The following will bring to your attention, once again, some of the most obvious.

1: The only reason this approach (4000 new bore holes for toxic waste disposal.) is being considered is the fact that the original plan to mine uranium In Situ is now irrelevant due to the low value of the material, the lack of demand worldwide, the lack of verifiable amount of uranium, a lack of verifiable funds to actually mine the radioactive product and of course the reality that alternative energy sources such as wind and solar are now employing more new workers than the oil and gas industries. These realities beg the question: "Why are we even considering this permit."?

One of the reasons for Azarga giving up on the mining was it's inability to clean up the waste from the mining effectively and intentioally poisoning the underlying aquifers and land surfaces. The injection wells will create the same problems of toxicity except in the injection scenario, the toxins will be forced into already necessary and utilized aquifers as opposed to the ruination of aquifer quality by transmissivity. The injection directly into these usable aquifers will simply accelerate the contamination of the aquifers.

3. Professional geologists and chemists from the South Dakoata School of Mines, Chadron State and private practice have testified most effectively as to the danger of this plan for all the residents in the area due to the irreparable damage done to the water supply including the Deadwood, Minnelusa, Inyan Kara aquifers and the most important aquifer of all, the Madison.

The misuse or contamination of the aquifers in the Black Hills flies in the face of good judgment due to the increasing importance of usable water not just in drought affected South Dakota but the nation and the world. We are depleting our water supplies by allowing the very kind of destruction envisioned by Azarga and the EPA. With the demand for water ever increasing due to continued world population increases, it is imperative that the protection and careful usage of our water supplies be our guiding light. To actually embrace the opposite behavior is to violate the EPA stated purpose of actually protecting the environment. It is no longer possible to deny the threats to our remaining water supplies driven by In Situ mining and water ruination. Recent articles in several scientific publications have clearly demonstrated the danger to our water quality and supply posed by this mining and bore hole toxicity. It is your responsibility to make sure the water remains safe and by even considering a permit to allow this is a violation of your responsibility.

The fact that Platinum Partners, which is Azarga's largest share-holder, is being charged with a variety of misdeeds which if convicted could provide prisoin terms for the guilty, should be a wake-up call to the EPA as the kind of people who are running the show for Azarga. With the company based in China, overseeing a

Canadian company with offices in Colorado, one can easily guess how Azarga feels about the long term health of the citizens in this area when compared to the greed for profit.

This a boom/bust scenario which if approved will provide 100 or so temporary jobs for a year or so and then only a handful of maintenace/mining operators. Whatever gain there might be for the employees and towns and counties will be more than offset by the cost for cleanup which will be borne not by Azarga but by those same towns and counties to the tune of scores of millions of dollars. The sad truth is that it cannot be remediated as it is well known that no In Situ mining operation, whether in Texas, Nebraska, or Wyoming or any other place ,has ever been cleaned to original condition. It is not difficult to imagine that real estate values will drop, tax revenues for the towns and counties will drop if this ill- conceived rape of the land and aquifers is appoved by the EPA.

Thank you for your attention. I hope this has been of some value in making your decision and I can only hope that you will make the right one.
Sincerely,
Ex. 6 Personal Privacy (PP)

My name is Ex. 6 Personal Privacy (PP) and my wife and I live on a small ranch south of Pringle and have been there for 26 years. Thank you for this opportunity to comment on Deep Well injection and uranium mining. My comments here were given at an earlier public meeting opposing the mining. injection

I am not a scientist nor an engineer nor do I receive payment of any kind for being opposed to the permits in question.. I am not a for profit corporation. I have no loyalties or any responsibilities to show a profit to any stockholders. I am free to do the right thing.

When commissioned as an officer many years ago, I swore an oath to uphold and defend the Constitution. The Constitution and the Bill of Rights of course support a prime directive: Clarify the responsibilities of the government and the rights of the people. Not businesses nor corporations' rights but citizen's rights. Our governments' responsibility is to the health and welfare of those citizens. Every civil servant, every citizen's board, every governor is accountable to the citizens who have allowed them to serve and if they do not protect the health and welfare and the rights of the people then they have abrogated their prime directive.

My references for this talk are the Power Tech/AZARGA permit application available from the South Dakota DENR most of which I have read, as well as the website of the NRC and the state laws regarding water and mining. I hope to bring your attention to what I believe are discrepancies and contradictions which should provide reasons for the denial of this permit application.

Despite P/T's repeated assertions that this operation would be safe, that is simply untrue. Nor is it true that radiation is actually good for you, nor that one can destroy radiation contamination by washing it off. PT spokespersons have been willing to freely state that scientific truths are nonsense apparently comfortable in saying anything that will support their cause regardless of it's falseness. This alone should force a denial of the permit. There are several issues that could interfere with the ability of P/T to actually perform this requirement not the least of which is that no ISL mining operation has ever remediated the land, waters and aquifers to baseline. Exemptions are asked for and usually given. This just provides the excuse to contaminate and not remediate. This obviously does not a safe operation make. If P/T actually cleans up and remediates the land and waters to a clean uncontaminated state, it will be the first operation to do so in the history of in situ mining. This is well known and incontrovertible.

First: 5.6.2.1 of the application states that the slope of the permit area is 2 to 6 degrees to the SW. Due to the location of Pass Creek and Beaver Creek, this slope will force any drainage from leaks and spills and land applications of contaminants plus precipitation to flow SW into these creeks and thus to the Cheyenne River and to Angostora, the Pine Ridge and the Missouri River. This is especially true during heavy downpours such as we experienced this summer which created a 4 foot wall of water that derailed dozens of RR cars and the damaging flooding in the Boulder area which released gallons and gallons of contaminants. These floods will happen again. When they do, there will be precious little to prevent damage to the mining area, not to mention a flooding of the contaminants on the ground. As indicated in 3.39 of the application, and I quote, " the hazard

for wind and water erosion... varies from negligible to extreme" "to extreme"! This obviously should be of "grave concern" to quote the Rapid CIty Council. And if the rainfall from our own downpours can cause a train derailment then it can cause other erosion as well. This indicates that the promises of safe containment should be considered questionable.

Second: PT will tell you that there is no communication between aquifers because of confining layers. However, in 3.4.1.4 it states that the Madison aquifer is 200 feet thick in the southern Hills up to 1000 feet regionally and could be connected to or communicate with the Minnelusa and the Deadwood aquifers which are the chosen repositories for the contaminated waste water, which will be injected under pressure. This communication could prove to be unsafe for obvious reasons. Additionally, in 3.4.1.7, P/T states that "no evidence of karsting has been observed". (erosion due to dissolution producing fissures and sinkholes) This is a below ground phenomenon and simply because something has not been observed at this time does not mean it will not occur later or that it is not there now. As the cave system in the Hills is known to be everywhere, it is only logical that there are fissures everywhere which will allow for "communication" between aquifers as stated above.

Third: Figures 3.4-17 and 3.4-20 show the open pit mines, the number of well holes and the down gradient and how the ore bodies on the east will flow directly into Pass Creek, and thence to Beaver Creek while the ore bodies on the west side will flow directly into Beaver Creek. In 34.5.3.9 P/Ts plans will account only for a 100 year flood. This plan does not take in account global warming, mega storms, floods, tornadoes, droughts etc. and plan to stop the flooding with a few well placed hay bales and ditches and berms. A 4 foot wall of water will not be controlled by these meagre efforts. In 5.4.2.3.2 PT simply states that the runoff will be managed with no indication of how they will actually do it beyond the attempts mentioned.

Fourth: In 3.6 P/T anticipates the potential for problems from winds and wind erosion with Fig 3.6-39 showing the wind directions and speeds in the mining and land application areas. The evapotranspiration will leave contaminated residue on the land to be blown away with the winds or washed away by the rains. In 3.11 " The landscape comprising the permit area is erosional in nature." This admits to the problem outright and taken at face value should indicate the inappropriateness of the area for the mining project. Additionally, we are told that radium will be the main contaminant and will simply sink to the bottom of the ponds (where it will sit up to 18 months with no covers before being removed or injected) but Table 3.4-10 shows the other dangerous byproducts of this type of mining. These include thorium, arsenic, cadmium, mercury, thallium, polonium and radon in addition to the uranium and radium. These dangerous by-products of ISL mining on the land and in the water cannot possibly be considered safe for wildlife, livestock or humans. In fact, P/T in 5.4.1.1.3, goes only so far as to say that the lead and thorium will be "treated as necessary" but fails to provide the details. In fact, how does one treat radon, or radioactive cadmium or arsenic??? These poisons will become concentrated due to the re-injection and recirculation of the water into and from the IK making the IK more contaminated rather than less. PT will tell you that the IK will get cleaner due to the bleed. I believe this is illogical nonsense.

Fifth: In 5.0 it states that "potential environmental impacts will be minimized". There are two problems with this statement: a) It admits that environmental impacts will occur and b) it accepts the fact that they have no intention or do not have the ability to actually remediate these impacts just minimize them. This is not in the public interest and indeed violates state law regarding non-contamination of public waters. Of interest is 6.3.4.2 where it states that P/T will provide "95% confidence that the ...units"... will..." meet the cleanup guidelines or action levels". Minimum? 95% confidence? 95% of the cleanup guidelines is unacceptable and if that is the best they can do, then the permit needs to be denied. Indeed, P/T makes no offer to do anymore than what they decide is reasonable. Additionally, in 5.5, "Solid wastes such as pond sludge; soils contaminated by leaks; spills of loaded or spent IX resin; filter sand...parts; equipment...will be disposed of at an NRC... facility". This a very general statement which lacks specifics as to the method of gathering up all this radioactive contamination which will have drained into the soil in and outside of the permit area. The fact that they know about the leaks, (such as the dozens of leaks at Crowe Butte in Nebraska,) but cannot or will not prevent them must be cause for alarm. The public needs more assurance than this. 5.3.9.2 states only that erosion of disturbed areas will be minimized. There are three problems with this assurance. a) P/Ts

admittance of the disturbed areas in the first place, b) they will not try to prevent any erosion outside of the disturbed areas only minimize the erosion inside the disturbed areas and c) they admit that they will not even attempt to repair the erosion to its original state. Public health is not served by this cavalier attitude towards runoff prevention. In 5.3.4.4 it admits that " all grades will provide for natural runoff" which as we have seen only further guarantees the flowing of contamination into the creeks and rivers. In 5.4.2.2, In reference to hazardous waste and "used oil"? " it is likely that this project will be classified as a conditionally exempt small quantity generator". CESQG This classification allows for up to 1000kg of hazardous waste a month or 12000 kg a year. What if it isn't so classified? Well, then, P/T simply assumes that they will obtain "the appropriate approvals or permits". This expectation of creating hazardous waste that needs yet another permit or approval due to its dangerous qualities should cast additional doubt as to the viability of this company to properly handle the responsibilities of this kind of operation. Another concern is in 5.5.1.2.3, where it states that excursions must be reported within 24 hours but the permit allows for a delay in correction of the excursion up to 30 days. 30 days!!! This is not a minimization of contamination. With the DENR no longer authorized to monitor and inspect the mining operation due to SB158, the danger of failure to correct and the allowance of the problem to continue is very real.

Sixth: 5.6.2.1 Potential soil impacts: Two to six % slopes will cause rain and wind erosion. Impacts to disturbed areas include: compaction, loss of productivity, loss of soil, salinity, soil contamination caused by clearing, excavation, leveling, stock piling, and redistribution of soil. "Due to the use of heavy machinery and high volume..... ..some soils have the potential of compaction." This can "lead to decreased infiltration, thereby increasing run off". This compaction "will be restored as possible following use." (Ten to twenty years later!!!)

The hazard for wind and water erosion vary between negligible and severe. Severe!!! P/T admits to the danger of compaction and erosion and then PT admits to build up on land of disposals of waste, salts, radionuclides, metals, metaloids, and the loss of soil fertility. This is not 95%clean or minimized or reasonably achievable or even a best effort. This is simply not proper and responsible work. Page 5-118

lists all the problems with spraying multiple contaminants on land, which I won't belabor as it has been covered by others. 5.6.5.1.3 PT accepts the potential of accidents which could release pollutants such as bulk chemical products, uranium loaded resin, dry yellow cake, solid by-product material. PT says it will simply remove the contamination. They do not say how unless you count their claim that it will wash off clean with water.They admit that the consequences of these spills range from minor exposures to "significant". And lest there be any doubt that this area will be radioactive and dangerous to human health this sign will be posted.:

5.7. 2.4 ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE MATERIAL.

Seventh: Another issue is the cost of reclamation. In their socioeconomic report, P/T allows for $9 million. The bond is only 1.5 million (which is less than $150 per acre or about one hour of dozer work) but it also acknowledges that the expected cost for reclamation could be as high as 75 million if I am not mistaken. And if WY is any guide, it could be as high as 150 million. The ability of P/T to afford even the 75 amount, depends on the amount of uranium removed and therefore the amount of yellow cake produced. The other side of the coin is the price for yellow cake to support this kind of expenditure. P/Ts figures rely on the price of $65. This of course is only a hopeful number as the current price is below $40. But even at $40, there will not be profit of over $200 million available for this kind of activity but rather, if my math is approximately correct, closer to $50 million. If the remediation is to cost upwards of $75 million, well...you can see that this just doesn't figure or as my rancher friends like to say, it doesn't pencil. If the company can't sell at $40 then what is to become of the remediation after the mining? if they can sell at $40 or below then what funds are going to be available to attempt the remediation in the first place? This is a very unhealthy set of circumstances.

Eighth: As we all know, and that includes the EPA, the NRC and P/T, the USGS has stated that there has never been an ISL mining operation that has returned the soil and water to a clean, before mining status. Not WY, not TX. If P/T wants to mine uranium in the Dewey-Burdock, then it has a debt to the people of the area and should guarantee in writing that they will clean up the soil and water to a clean uncontaminated state. That is what CO wanted. The Project Manager said at his meeting at the Fall River Conservation office recently that P/T would indeed guarantee completely that it would clean up the permit area 100% with no mention of

minimum, no mention of 95%, no mention of putting forth a "best effort", but a verbal guarantee to absolutely clean up the permit site and the aquifers. Let us have a contract to that effect. It is my understanding that P/T would not/could not provide that guarantee to Colorado nor could it find 5 ISL operations that had cleaned up the water and the land as proof that it could be done. That is why P/T left Colorado empty handed and came to a sparsely populated area of the Black Hills in the hopes of trying it here. With some success I have to admit due to the state legislature having failed the citizens of this state by weakened the mining and water requirements for ISL mining and removing DENR responsibility of oversight. Not surprisingly, the bill was written by a P/T lobbyist. RCJ 22nd

Ninth: One of the serious problems I see with this operation is the lack of mining experience of the people in charge. For example, the company has yet to mine uranium. The Project Manager has never been a project manager on any other ISL and in fact has done very little "engineering" of any kind for many years The executives have experience in the nuclear industry and in administration but not in managing and mining an ISL uranium mine. At least not according to the CVs. This is a very complicated and potentially dangerous and very expensive proposition. One of P/T spokespersons is a former Professor at the School of Mines. He has not mined any uranium at an ISL mine The CEO has not mined any uranium at an ISL mine. They have not developed yellow cake, they have never remediated an ISL area. What they have accomplished is to file a permit application. And that after many corrections from the NRC and the DENR. I have to believe that this has to be their first filing for an ISL mining permit. So...this will be a trial run for P/T personnel, a first time operation. I am sorry but I have no faith in a lack of experience. I need to see years of experience in the ISL industry with a record of clean remediation and contamination containment. Based on their inability to produce a clean permit application without DENR and NRC assistance and their lack of experience and their public admissions that there will be leaks and spills and runoff and contamination of the soils, there is no reason to expect P/T to be able to keep the public safe from this contamination or remediate the operation to even a minimum standard. Indeed, their stock price would not be pennies a share if investors had any faith in this management and this operation. ARSD 74:29:07 clearly states that "The individual who develops the reclamation plan must be competent in the management and planning of the specific type or types of reclamation selected." With no prior experience in reclamation, P/T clearly fails this test.

Tenth: 6.3 The project manager told me that I could actually drink a glass of radioactive water with no ill affects, that if one were to be subjected to radiation poisoning that this could simply be cleansed by the normal body functions or washed off with no ill effects, that radioactive equipment and material could be cleansed and made neutral if you will, by a high pressure wash system. In my mind, this demonstrates a complete lack of knowledge about radioactivity and the dangers of radioactive contamination. P/T says it can decontaminate the soil yet previously stated that contaminated soil would be removed to a NRC approved site and that contaminated equipment will remain radioactive and either be taken to another site or if liquid, injected into existing aquifers. Contaminating aquifers is not minimizing that contamination. It is just putting it out of sight. We have heard about "permissible limits", 95% cleanliness, minimized contamination, and recently a guarantee to contain the contamination within the permit boundary. The NRC allows that the permittee needs only to remove the contamination to as low as reasonably achievable (or ALARA). But we are told that it will be 100% cleaned. As mentioned previously, the NRC knows it can't be done cleanly so it abrogates its prime directive and puts the health of the mining operation in front of the health and safety of the citizens. The ALARA is in direct contradiction to that directive. Any DENR approval of this operation is in direct contradiction of its purpose to protect the people. There seems to be no true agreement as to just exactly how far any remediation has to go to qualify for a job well done and as we know, the contamination from an ISL mining operation is not cleanable. This vagueness should be, especially at this late stage, grounds for a denial.

There are several situations that require the Mining Board to deny a permit of this kind

(((They are 1-40-27:

(1) (a) If the permittee has intentionally misrepresented a fact

If the permittee has had any permit revoked (denied)under the environmental laws of any state. (Colorado comes to mind.)

(2)The applicant substantially duplicates an application within the past 5 years that has been denied, the denial having not been reversed by a court of competent jurisdiction)))

45-6B-32:

(6) The proposed mining operation and reclamation cannot be carried out in conformance with the requirements of 45-6B-35 (grading, disposal of refuse, removal and handling of topsoil, disturbance to hydrologic balance, slides-subsidence or damage protection-fencing, and reclamation)(-38 states will not pollute surface or ground water!!!)(-41 Disturbance to hydrologic balance. Any disturbance to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quality and quantity of water in surface and groundwater systems both during and after the mining operation and during reclamation shall be minimized.)

45-6B-33:

Reclamation of the affected land pursuant to the requirements of this chapter is not physically or economically feasible.

According to today's RCJ, P/T lobbyist and Program Manager "speaking at a Rapid City Council committee meeting in August, conceded that if the project goes through, the company will need to somehow fund it." "They will need a larger financier going forward", Hollenbeck said, adding that it could lead to a joint venture or selling more stock, or perhaps selling the company. "It may be a sell-out of the project," he said. "I don't know that." P/T hasn't the financing to even start the project even with over 50 million shares being sold. How can this board approve this permit when they have financing for neither the start nor the finish.

THIS HAS BEEN SHOWN AND THE PERMIT SHOULD BE DENIED.

(2) Substantial disposition of sediment in stream or lake beds ,landslides or water pollution cannot be feasibly prevented

THIS HAS BEEN ADMITTED AND APPLIES. THE PERMIT SHOULD BE DENIED

The proposed mining operation will result in the loss or reduction of long range productivity of an aquifer, public and domestic water wells, watershed lands, aquifer recharge areas, or significant agricultural areas

AS A RESULT OF THE BILLIONS OF GALLONS OF WATER USED AND CONTAMINATED, THIS IS HIGHLY PROBABLE AND THIS PERMIT SHOULD BE DENIED.

The Board finds that any probable adverse socioeconomic impacts of the proposed mining operation outweigh the probable beneficial impacts of the operation. Contamination would affect tourism, ranching, domestic water supplies, and the future economic health of the region.

EVEN AT $65, THIS IS NOT A VIABLE ECONOMIC UNDERTAKING. AT $40 IT IS A FINANCIAL IMPOSSIBILITY. THIS BOARD HAS A CLEAR AND LEGAL RESPONSIBILITY TO STRONGLY OPPOSE AND DENY THIS OERMIT APPLICATION

refer to the Letter of opposition from the FR Conservation District as one example and the "grave concern" of the RC Council I also ask the Board to consider and recognize the hundreds of signatures of people who have signed their names in opposition to this permit. As you know, these signatures represent upwards of 10 to 20 times those who are opposed. Please deny this permit.

Thank for your attention.

If time allows, I would like to read this at the May meeting in Hot Springs and will provide a hard copy if requested.

Sincerely,

Ex. 6 Personal Privacy (PP)

After reviewing both the Class III and Class V Draft Area Fact Sheets pertaining to the Azarga Mining Proposal, I am confounded at how the EPA can even consider allowing such a project to go forward. The list of probable and possible damage that are revealed in these reports are truly frightening. The EPA's own questioning of facts offered by PowerTech is reason enough for disallowing of this permit, but I will try to offer other clear and pertinent problems with this criminal endeavor. First of all, as I mentioned in my original response, this project will be conducted only a mile and a half from a major fault zone. That in itself is reason enough to disallow this work. Page 26 of the Class III fact sheet openly admits that "many other faults are probably present but not discernible because of poor exposures." That fact, coupled with PowerTech's ridiculous assertion that any faults or fractures found in the injection area can be later avoided by modifying the pattern of the lixiviant flow around the faults or fractures, leads me to the conclusion that there is no way for them to stop a leak of toxic lixiviant into other areas. That type of fluid breach in a known fault area must be considered a factor in future slippage events and spoiled water sources. Page 22 of the same report supports the fact that "at least one breach in the Fuson confining zone" has occurred and strongly implies that other breaches will be found. The shale containment formation mentioned on Page 19 states " shales tend to be less permeable than sandstone" yet no where does it state that shale is 100% resistant to fluid breach. Considering the fact that at least 19 separate water wells are active in the area and PowerTech has shown little or no ability to contain their possible or probable breaches, the idea that this project is safe cannot be considered seriously. Page 37 of the same document admits that prior drillholes "may not have been plugged in a manner that would prevent communication between subsurface aquifers." Reading these reports, it is obvious that PowerTech has showed continuous deficient care in operation and responsibility to its geologic and aquifer environment. If the EPA wishes to do its job and protect the ecology and environment of the Black Hills, it will read its own reports and come to the easy conclusion that this is both a dangerous and irrational project. Ex. 6 Personal Privacy (PP)

@@Concerns about general environmental impacts

I strongly object to both of these proposals. I urge the EPA not to permit these activities in the counties of Fall River and Custer located in the south western South Dakota. My concerns are with the health and well being of the ecology of the area, the Cheyenne River and all waters downstream of the proposed injection well sites.
Please Do Not issue permits for these projects. Ex. 6 Personal Privacy (PP)

&& POSTCARD

Dear EPA, Region 8:
Here are my comments on the Underground Injection Control Program's Draft Permits for the
Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells:
• Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.
• Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated.
• A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.
• The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.
• The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes. *Post cards from* Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

Dear EPA, Region 8: SAVE OUR WATER.
Here are my comments on the Underground Injection Control Program's Draft Permits for the
Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells:
• Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.
• Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated.
• A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.
• The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.
• The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped. ~~until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes.~~ Ex. 6 Personal Privacy (PP)

Dear EPA, Region 8: No, not here, we do not want your stink.
Here are my comments on the Underground Injection Control Program's Draft Permits for the
Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells:
• Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.
• Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated.
• A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.

• The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely. Ex. 6 Personal Privacy (PP)
• The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes.

There are too many possibilities for error and too many risks associated with the waste injection methods for this to move forward. Please protect our environment and deny the exemption- please prioritize our children's health over profit. Ex. 6 Personal Privacy (PP)

I'm part of the #WomensMarch movement. I'm from Colton, New York, and I'm concerned about uranium disposal in South Dakota. Here's why it should never be acceptable to poison the earth and its natural resources that we depend upon. Please do not approve the contamination of these precious resources that are depended upon. They feed and nourish our children and all of us. This disposal method can never be undone. In the first 100 days of the new administration, I hope that you understand and take these concerns seriously. Sincerely, Ex. 6 Personal Privacy (PP)

No mining waste in our aquifers! No! Do not allow mining operations to inject mining waste into the underground aquifers in South Dakota! Protect our land, protect our air, protect our water. That what the EPA does best. *unsigned*

While the EPA might be gutted financially, my hope is there are people there that still understand the important of keeping our waterways, and airs clean of all pollutants. This project would be an unbelievable hazard, contaminating the Inyan Kara aquifer which is being used for agriculture, as well as contaminating other aquifers. Mining wastes are often radioactive and would create a permanent hazardous waste dump site in the Black Hills. One needs to only look at what happened in Brazil with the Doce River to understand the potential calamity a project like this represents.
I would appreciate if you officially include my comment - while I may not live in South Dakota I have relatives that do. I also spent some time reporting from Standing Rock in the last year. Furthermore the pollution of waterways effects all of us directly. Every body of water is connected to another, to our soil where we need food to grow so we can survive.
Ex. 6 Personal Privacy (PP)

Formal comment under the authority of the Safe Drinking Water Act and UIC program regulations, regarding:

- Proposed two Underground Injection Control (UIC) Draft Area Permits
- Proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site near Edgemont, SD

I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil. Ex. 6 Personal Privacy (PP)

Please accept this email/communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations.
I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil. Ex. 6 Personal Privacy (PP)
Ex. 6 Personal Privacy (PP)

PLEASE do not allow these permits! Protection for our environment is systematically being removed. South Dakota has had more than its share of environmental rape. But protecting our environment is important, whether this occurs in South Dakota, Wyoming, Oregon or any other state. Please do the right thing and deny these permits. Ex. 6 Personal Privacy (PP)

I after reading the entirety of the documents, I am just going to restate my comment under a Trump administration reality has gone on holiday. There is nothing but bad (you, know, long after the fact bad) to come from this, and it is the duty of the EPA to ensure the environment comes before corporate gains! Ex. 6 Personal Privacy (PP)

I do not know a word that properly expresses how strongly I oppose to this act. Of course, this act should not be considered okay anywhere but, having relatives in multiple places near the Black Hills the idea of putting radioactive waste in the ground and therefore ruining the beautiful, wild Black Hills is sickening. I beg you, please do not let this happen! Ex. 6 Personal Privacy (PP)

Once again we run the risk of standards for treating the waste not being stringent enough and residents enduring dangerous consequences over time. And once again, big business seeks to make tons of money off the backs of the little guy, we common folks, who do not have the money to buy the power to stop them. When will we return to the concept of the common good? The EPA can embrace that concept and apply it to this situation. Please oppose this project of uranium mining. Ex. 6 Personal Privacy (PP)

Please, there are some things that we can't get wrong, and this is one of them. Clean-up is near impossible and will not be an option. Some things can't be reversed. Between this and the proposed healthcare repeal / replace, you're going to actively kill off people. Is that what you really want? Please, be a responsible government for all the people, not just a few who will benefit from this. Ex. 6 Personal Privacy (PP)

I am writing to express grave concerns about the plans to mine uranium in South Dakota. There seem to be clear environmental risks at stake and I am not reassured by the EPA's assertion that it has consvulted with experts or with local Indian tribes. There is no way to guarantee that accidents won't happen and that it not a risk that I am willing to take. As a citizen of the US and a member of the public, I am staunchly opposed to this step Ex. 6 Personal Privacy (PP)

I am writing to express my concern about the proposed uranium mining in South Dakota. I am very much AGAINST this idea and urge you not to proceed! This is very dangerous for our environment Ex. 6 Personal Privacy (PP)

Please stop with these bad ideas, that only harm us all. Ex. 6 Personal Privacy (PP)

You must withdraw these permits for the sake of residents impacted by the injections and the slippery slope you will create by even considering such reckless activity. I urge this agency to reject both activities immediately. *Aaron Koffman*

I am writing to urge you to deny the exemption for the uranium mining project. The cost of this project to human health vastly outweighs the benefits Ex. 6 Personal Privacy (PP)

Profits are not to be placed above people. Period. Push these companies to abide by new regulations and hold them accountable for damaging our country, our welfare and overall quality of life. Ex. 6 Personal Privacy (PP)

Please I beg of you-no uranium mining waste released into SD aquifer!! You are effectively dooming the planet, and all her children, with your crazy CO2 beliefs and reckless and wanton destruction of our delicate environment. SHAME Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)

I am against this proposal, as all the caring neighbors in the Custer Highlands subdivision. We are close to the site and dont agree with the pollution associated with the mine. It would permanently contaminate the water and make surrounding properties unlivable. Most of the residents here have come from another place and gravitated toward this area because of the natural beauty and healthy wildlife. Bringing toxic waste to the surface is not what this beautiful area is all about. Please reconsider and SAY NO!!! Ex. 6 Personal Privacy (PP)

NO NO NO, it is not OK to mine uranium. Do your job EPA and start protecting people and the environment. It is treason to put corporation profits ahead of the job you are supposed to be doing. Ex. 6 Personal Privacy (PP)

Please do not allow uranium mining waste disposal in aquifers or streams. It is the EPA's job to protect people and ecosystems, not pander to mining and energy interests. Ex. 6 Personal Privacy (PP)

I would like to voice my concern for the allowing permits on this project. It is only common sense that if you allow any of these activities, they will eventually have an effect on the environment around them. I say NO, resoundly to allowing any type of injection mining any where in our country. We need to invest time, money and efforts into renewable energy sources and stop all dirty fuel mining now and in the future. If we don't stop now, it will soon be to late. Again I say No to allowing these permits. Ex. 6 Personal Privacy (PP)

If accessing this water will be for profit then you will just be adding to the stresses of mankind.
If you get it done in a not for profit manner i can agree with it, otherwise my answer will be no. Ex. 6 Personal Privacy (PP)

After reading the proposals I would like to ask the EPA, please do not grant Powertech these permits in SD. This project carries a lasting risk and is unnecessary. A clean environment has immeasurable valuable, do not allow Powertech to exploit it for profit. Ex. 6 Personal Privacy (PP)

@@Concerns for contamination of surface water and the Cheyenne River

Given the track record of mining in the Black Hills, gold and other, and of global corporations which are more interested in the bottom line than in the common good, I would definitely oppose any such mining, no matter what the method, in the southern Black Hills. The Cheyenne River already has pollutants from gold mining flowing through it to communities which rely on that river for drinking water. The fiasco of dumping uranium tailings near Saint Stephens, WY, and their subsequent costly removal, and the millions of dollars spent by the DOE to monitor ground water and provide clean water for those who were affected by in the area, convince me that uranium mining is of no practical benefit to the nation, and much less to those in South Dakota who potentially will be affected by it. Refuse the permit. The risk is not worth the money to be generated. Ex. 6 Personal Privacy (PP)

@@Concerns about adequate monitoring

They claim that In-situ mining is safe, there is no safe, clean in-situ mining. Crawford, NE had violations that were discovered by their State oversight.We can assume, from past experience, that our State of SD will not be actively involved with monitoring this project. By the time we realize there is a problem, it will be too late. Ex. 6 Personal Privacy (PP)

After studying and researching pages and in permitting ISU mining, and knowing how long it has been since the last water testing on wells for the above named project; I am proposing that the water should be retested along with the leaching, etc. Conditions of groundwater can and do change. There also were test conducted besides the company that was hired by Powertech, and two of three as it showed did not recommend ISU. Thank you for The consideration. Ex. 6 Personal Privacy (PP)

@@Concerns about impacts to aquifers & contamination of drinking water

This letter is concerning the Powertech proposal to use groundwater from the Madison aquifer, and to utilized deep well injection methods to dispose of waste associated with uranium mining.
I strongly object to both of these proposals. I urge the EPA not to permit these activities in the counties of Fall River and Custer located in the south western South Dakota.
My objections are based on the probable contamination of the Madison & Inyan Kara aquifers. Ex. 6 Personal Privacy (PP)

Here are only a few of the Fall River County Well Reports that were recorded in Pierre, SD. This is only a list of the domestic wells and does not include municipal wells. I have not had enough time to thoroughly analyze the reports, but I can assure you that The Minnelusa aquifer provides water to this region and cannot be jeopardized by injecting waste water from the in-situ mining process. I am also attaching the well report for our new State Veterans Home, which is also in the Minnelusa aquifer. We cannot allow anyone to jeopardize our water supply by injecting anything into our aquifers or by depleting our, already limited supply, of water for this process. Our water is finite and must be protected!
The water will never be returned to its current state. The EPA standards are merely lowered to make it OK once the water is contaminated. I understand that the EPA is already proposing to exempt the portion of the Inyan Kara aquifer in the project area from the Safe Drinking Water Act, something that is necessary for mining to occur!!!!!!!!!
If the EPA decides to grant these permits, they will be responsible for the outcome. There will be no way to restore or replenish our water supply and that will be a sin.
Ex. 6 Personal Privacy (PP)

As a resident and citizen of Hot Springs, South Dakota, I ahve listened, and read about the mining uranium using the in situ Leaching process in the Dewey Burdock area, by Azarga/Powertech, Powertech Azarga.
After careful consideration of both opinions I now think that the potential aquifer contaminiation by the in situ uranium mining is far, far too risky for the health of the citizens of Hot Springs, Edgemont, and Rapid City, an dthe children and the pregnant women, and the wildlife and the environment.
Please do not allow it. Stop it. Ex. 6 Personal Privacy (PP)

Please consider this letter from the 750 plus members of American Legion Post 22 to be in opposition to the proposed uranium mine which is to be located in Fall River County.
The members of American Legion Post 22 believe this mine could and/or would endanger both the Inyan Kara and the Minnelusa aquifers. The possible endangerment of these two aquifers is totally unacceptable.
We would urge the EPA to deny the requested permits. Your attention to this letter is appreciated. Ex. 6 Personal Privacy (PP)

EPA Region 8 panel,
I am a resident of the Hot Springs area in Fall River county. I am very concerned about the proposed draft permits to Powertech/Azarga for the Dewey-Burdock Uranium Mine and Deep Disposal Wells. The area for the permits is in itself a very sensitive area It is in proximity and
downstream from major recharge areas for all three aquifers, the Madison, Minnelusa and Inyan Kara. The Black Hills, in general, are also geologically unstable as there is already on going seismic activity. This is important as waste water deep injection wells have been linked to
increased earthquake activity in Oklahoma Injection wells putting hazardous waste into the Minnelusa and Inyan Kara could have other far
reaching and serious effects. Many ranchers and other residents of Custer and Fall River counties use the Minnelusa water for drinking, watering livestock and irrigation. The Inyan Kara water is also used extensively for livestock and irrigation in many areas. This was reported in a
US Dept of Interior, US Geological Survey study "Hydrology of the Black Hliis /Vea, South Dakota" by Daniel G. Driscoll, Janet M. Carter, Joyce E. Williamson and Larry D. Putnum, Water-Resources Investigations Report 02-4094. This information is in contrast to what Powertech/Azarga reports.
The USGS report states the extent of the aquifers describing the vast area of distribution of the water and the varying water qualities. In most areas the water is usable and meets quality standards for most uses. The Powertech excuse that these aquifers are already contaminated

is not a valid reason to dump wastewater into them. This report also describes that the amount of transmission between the aquifers can vary from undetermined to significant One can make the assumption that heavy contamination of one aquifer could therefore contaminate other
aquifers and have a wider effect not only in damage but in cleanup efforts.
The geology of the strata formations include numerous breccia pipes, fractures and caverns (ex. Jewel Cave and Wind Cave formations) which no one knows of their extent. These are the pipelines of water transmission by these aquifers and the extent to which they communicate with
each other Is unknown. One should also include the 7650 abandoned boreholes that leak and transfer water.
The artesian springs from these three aquifers are important water supplies for recreation, livestock use, wildlife and irrigation. They add water to all the streams and rivers in the surrounding area. The whole region relies on this supply of clean water, It is a major factor in our economies. If the clean water supplies fail then the economies that depend upon them fail. Our tourism, ranch, retail, and hospitality businesses and livelihoods would all be affected. I live here. This is my community. I depend upon a rural well water source. What happens if
that water source gets contaminated and is condemned? Where do I turn to? Will a government agency be available to help out? Will they supply us with clean water and at what cost? This is the gamble; allowing permits to inject hazardous wastewater into the Minnelusa and Inyan Kara and risk the possibility of massive contamination or refusing Powertech/Azarga the permits to do this. I would not take that risk. I lived in Milwaukee, WI as a child when lake Michigan was so contaminated with industrial waste all recreation, fishing and use were restricted. I know what can happen. I hope we don't follow the path that caused that pollution because that mistake will not be as easy if not impossible to remediate. It will affect generations.

Ex. 6 Personal Privacy (PP)

Encl: Title page of the USGS report with the abstract and introduction.
U.S. De,altnlNt al tN lalerior
U.S. Geological Sarver
Hydrology of the Black Hills Area,
South Dakota
By Daniel G. Driscoll, Janet M. Carter, Joyce E. Williamson, and Larry D. Putnam
Water-Resources Investigations Report 02-4094
Prepared in cooperation with the
South Dakota Department of Environment and Natural Resources
and the West Dakota Water Development District
U.S. Deparbnent of the Interior
GALE A. NORTON, Secretary
U.S. Geological Survey
~ . . .
Charles R Groat; Director
The use of firm, trade, and brand names in this report is for identification purposes only and
does not constitute endorsement by the U.S. Government.
Rapid City, South Dakota: 2002
For additional infonnation write to:
District Chief
U.S. Geological Survey
1• Ml View Road
Rapid City, SD 57702
Copies of this report can be purchased from:
U.S. Geological Survey
Infonnation Services
Building 810
Box 25286, Federal Center
Denver, CO 80225-0286
Hydrology of the Black Hills Area, South Dakota
By Daniel G. Driscoll, Janet M. Carter. Joyce E. Williamson, and Larry D. Putnam
ABSTRACT

The Black Hills Hydrology Study was initiated in 1990 to assess the quantity, quality, and distribution of surface water and ground water in the Black Hills area of South Dakota. This report summarizes the hydrology of the Black Hills area and the results of this long-term study.

The Black Hills area of South Dakota and Wyoming is an important recharge area for several regional, bedrock aquifer systems and various local aquifers; thus, the study focused on describing the hydrologic significance of selected bedrock aquifers. The major aquifers in the Black Hills area are the Deadwocxl, Madison, Minnelusa, Minnekahta, and Inyan Kara aquifers. The highest priority was placed on the Madison and Minnelusa aquifers, which are used extensively and heavily influence the surface-water resources of the area.

Within this report, the hydrogeologic framework: of the area, including climate, geology, ground water, and surface water, is discussed. Hydrologic processes and characteristics for ground water and surface water are presented. For ground water, water-level trends and comparisons and water-quality characteristics are presented. For surface water, stream.flow characteristics, responses to precipitation, annual yields and yield efficiencies, and water-quality characteristics are presented. Hydrologic budgets are presented for ground water, surface water, and the combined ground-water/surface-water system. A summary of study findings regarding the complex flow systems within the Madison and Minnelusa aquifers also is presented.

INTRODUCTION

The Black Hills area is an important resource center that provides an economic base for western South Dakota through tourism, agriculture, the timber industry, and mineral resources. In addition, water originating from the area is used for municipal, industrial, agricultural, and recreational purposes throughout much of western South Dakota. The Black Hills area also is an important recharge area for aquifers in the northern Great Plains.

Population growth, resource development, and periodic droughts have the potential to affect the quantity, quality, and availability of water within the Black Hills area Because of this concern, the Black Hills Hydrology Study was initiated in 1990 to assess the quantity, quality, and distribution of surface water and ground water in the Black Hills area of S~u_t~pakota ~, (Driscoll, 1992). This long-term study has~ it~OOp~' erative effort between the U.S. Geological Survey

(USGS), the South Dakota Department of Environment and Natural Resources, and the West Dakota Water Development District, which represents various local and county cooperators.

The specific objectives of the Black Hills Hydrology Study included:

1. Inventorying and describing precipitation amounts, streamflow rates, ground-water levels of selected aquifer units, and selected water-q~ality charac~ teristics for the Black Hills area.

2. Developing hydrologic budgets to define relations among precipitation, streamflow, and aquifer response for selected Black Hills watersheds.
3. Describing the significance of the bedrock aquifers in the Black Hills area hydrologic system, with an emphasis on the Madison and Minnelusa aquifers, through determination of:
   a. aquifer properties (depth, thickness, structure, storage coefficient, hydraulic conductivity, etc.);
   b. the hydraulic connection between the aquifers;
   c. the source aquifer(s) of springs;
   d. recharge and discharge rates, and gross volumetric budgets; and
   e. regional flow paths.
4. Developing conceptual models of the hydrogeologic system for the Black Hills area.

Purpose and Scope

Toe purpose of this report is to summarize the hydrology of the Black Hills area and present major findings pertinent to the objectives of the Black Hills Hydrology Study. Toe information summariud in this report has been presented in more detail in previous reports prepared as part of the study. Because the Black Hills area of South Dakota and Wyoming is an important recharge area for several regional, bedrock aquifers and various local aquifers, the study concentrated on describing the hydrogeology and hydrologic significance of selected bedrock aquifers. The highest priority was placed on the Madison and Minnelusa aquifers because: (1) these aquifers are heavily used and could be developed further; (2) these aquifers are connected to surface-water resources through streamflow loss zones and large springs; and (3) hydraulic connection between these aquifers is extremely variable. The Deadwood and Minnekahta aquifers had a lower priority because they are used less and have less influence on the hydrologic system. Toe fractured Precambrian rocks, Inyan Kara Group, and various local aquifers, including minor bedrock aquifers and unconsolidated aquifers, had the lowest priorities because: (l) the Precambrian

and local aquifers are not regional aquifers with regional flowpaths; and (2) the Inyan Kara Group is not used as extensively in the Black Hills area as the other priority units.

Hydrologic analyses within this report generally are by water year, which represents the period from

October 1 through September 30. Discussions of timeframes refer to water years, rather than calendar years, unless specifically noted otherwise.

Description of Study Area

The study area for the Black Hills Hydrology Study consists of the topographically defined Black Hills and adjacent areas located in western South Dakota (fig. 1). Outcrops of the Madison Limestone and Minnelusa Formation, as well as the generalized outer extent of the Inyan Kara Group, which approximates the outer extent of the Black Hills area, also are shown in figure 1. Toe Black Hills are situated between the Cheyenne and Belle Fourche Rivers. Toe Belle Fourche River is the largest tributary to the Cheyenne River. Toe study area includes most of the larger communities in western South Dakota and contains about one-fifth of the State's population.

The Black Hills uplift formed as an elongated dome about 60 to 65 million years ago during the Laramide orogeny (Darton and Paige, 1925). The dome trends north-northwest and is about 120 mi long and 60 mi wide. Land-surface altitudes range from 7,242 ft above sea level al Harney Peak to about 3,000 ft in the adjacent plains. Most of the higher altitudes are heavily forested with ponderosa pine, which is the primary product of an active timber industry. White spruce, quaking aspen, paper birch, and other native trees and shrubs are found in cooler, wetter areas (Orr, 1959).

The lower altitude areas surrounding the Black Hills primarily are urban, suburban., and agricultural. Numerous deciduous species such as cottonwood, ash, elm, oak, and willow are common along streams in the lower altitudes. Rangeland, bayland, and winter wheat farming are the principal agricultural uses for dryland areas. Alfalfa, com, and vegetables are produced in bottom lands and in irrigated areas. Various other crops, primarily for cattle fodder, are produced in both dryland areas and in bottom lands.

Beginning in the 1870's, the Black Hills have been explored and mined for many commodities including gold, silver, tin, tungsten, mica, feldspar, bentonite, beryl, lead, zinc, uranium, lithium, sand, gravel, and oil (U.S. Department of Interior, 1967). Mines with.in the study area have used various techniques including placer mining, underground mining,

and open-pit mining.
Ex. 6 Personal Privacy (PP)

no to black hills mining and milling..not worth the risk!
A foreign holding company is seeking three EPA permits to pollute the precious water tables underlying the Black Hills of South Dakota, which is the recharge area for our streams and lakes, municipal supplies, private wells, and agricultural use in the entire .. Ex. 6 Personal Privacy (PP)

I moved to the Black Hills of SD because of clean water, air and a wonderful place to recreate outdoors. Now a foreign holding company is seeking three EPA permits to pollute the precious water tables underlying the Black Hills of South Dakota, which is the recharge area for our streams and lakes, municipal supplies, private wells, and agricultural use in the entire western state.
I have a problem with this. My house and well are not that far as the aquifer flows AND I do not want to see the beautiful Black Hills known for the tourism money that the qualities I listed above to be ruined by a number of dirty and polluting uranium mines.
The proposed min and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 od boreholes that have not been properly plugged. It will be impossible to contain mining fluid or waste liquids, and contamination of our ground water is very likely (as it has shown to be in all uranium mines in the USA).
Your agency is the United States Environmental Protection Agency. You are to protect the American citizen from this kind of pollution. Plus we are dealing with a foreign holding company and they will not think protection our water is that important. And you do not have the field personnel to monitor this mine in an adequate manner.
I urge you to not grant the permits for this mine.
Thank you for your time and consideration, Ex. 6 Personal Privacy (PP)

As a Black Hills resident and retired pathologist, I am strongly opposed to any attempt to mine local aquifers for uranium. I have carefully reviewed as much data as I can find on the reliability of prevention of cross-aquifer contamination by lixiviant and liberated heavy metals using current techniques. I find no assurance that a mined aquifer can be returned to a pre-mining condition. I'm also concerned by the vast volumes of water required by this process, considering that we live in a semi-arid environment.
I am a proponent (and an experienced user) of renewable-energy generation of electricity. Given the current economics and feasibility of renewable energy plus storage for our electricity needs, I find no justification for potential environmental and public-health risks inherent in further reliance on nuclear power.
Thanks for your consideration of these comments.
Sincerely, Ex. 6 Personal Privacy (PP)

I am replying to this e-mail, since I am not sure you remember me. I attached a link of an article/research that refer to "groundwater pollution" which I had mentioned to you. It does not go into detail of the research like the one PDF document I have, and still look for. Maybe it can lead you into the right direction of the actual test results. Altough I am disappointed in the final judgement by the EPA, I feel you should consider the findings.
I will keep searching for the above mentioned document,.....i saved so many of them.
/thank you,
Here is the link: [HYPERLINK "https://psmag.com/why-are-we-allowing-uranium-miners-to-pollute-groundwater-in-drought-zones-cccfb0323e4d?gi=7d1e29495e2b"]
Ex. 6 Personal Privacy (PP)

Black Hills Chapter
TAKE ACTION TODAY
Help Us Stop Uranium Mining in the Black Hills
Thank you for signing a petition opposing ISL (in-situ leach) uranium mining in South Dakota! I thought you'd like to know about an important development - the Environmental Protection Agency (EPA) has issued draft permits for Powertech Uranium (Azarga). If these permits were to be finalized, they would allow the company to inject waste water into the Minnelusa aquifer, and to drill 4,000 wells into the Inyan Kara aquifer to conduct the mining process. The Minnelusa and Inyan Kara aquifers are currently being used by people for drinking water and agricultural operations. Yes, the mining would occur in an aquifer being used by people!

If they were finalized, these permits would be a license to pollute our groundwater. We need to stand up once again and say that we don't want uranium mining in the Black Hills.
As you know, water is precious in western South Dakota. Why risk our scarce water for a foreign company that has never mined uranium, and for a mining technique that has never returned water to its original condition?
The EPA is holding hearings in Rapid City (May 8 and 9), Hot Springs (May 10), and Edgemont (May 11) to gather public input on the proposed permits. Please attend the hearings. We hope that you will speak to state your concerns -- but just being present is also important. Show the EPA that we are watching. The details can be found here:
https://www.dakotaruralblackhills.org/uranium-mining
If you are unable to attend, please submit a written comment by May 19, 2017. The EPA needs to hear from concerned citizens like you!
Click Here to download our 2017 Uranium Mining Fact Sheet
Read More
Protect Black Hills Water
Tell the EPA that Uranium Mining & Milling are Not Worth the Risk!
Public Comment Period Open Until May 19, 2017.
Write Now! Attend the Local Hearings!
A foreign holding company is seeking three EPA permits to pollute the precious water tables underlying the Black Hills of South Dakota, which is the recharge area for our streams and lakes, municipal supplies, private wells, and agricultural use in the entire western state.
CLICK HERE TO READ MORE
Learn More and Take Action!
To keep up to date on this and other issues in the Black Hills, please sign up on our website to continue to receive these important updates. www.dakotaruralblackhills.org
Join the Black Hills Chapter of Dakota Rural Action on Facebook!
Copyright © |2017| |Dakota Rural Action|, All rights reserved.
Want to change how you receive these emails?
You can update your preferences or unsubscribe from this list
This email was sent to **Ex. 6 Personal Privacy (PP)**
why did I get this? unsubscribe from this list update subscription preferences
Dakota Rural Action, West · 518 6th Street, Suite 6 · Rapid City, SD 57701 · USA Ex. 6 Personal Privacy (PP)

Thanks soo much! I just spoke to the Hot Springs City Engineer, Tracy Bastian, who said the city of Hot Springs, as well as many other private wells in this area, get their drinking water from the Minnelusa Aquifer. I would expect that if Power Tech/Azarga, before being seriously considered for this project, should be responsible for providing and paying for a baseline water test of the wells that provide drinking water from the Minnelusa Aquifer. Unfortunately, once the damage is done, there will be nothing that anyone can do to restore our drinking water to its original purity except to lower the standards for safe levels for the contaminants, as has been the case where contamination has occurred at other in-situ sites. Please include this to my written comments regarding this project. **Ex. 6 Personal Privacy (PP)**

I write to you regarding my concern for our drinking water supply, which I believe may be in jeopardy if the Dewey Burdock Uranium project is approved. I am attaching my personal well report along with just a small sample of others that I am aware of. According to Hollenbeck, Power Tech/Azarga plans on re-injecting the solution they use to extract uranium, back into the Minnelusa Aquifer. That is were so many of us get our drinking water and this is unacceptable!! I feel an urgent need to provide you with the link and person who is my 'go to pro' at the SD DENR to verify and answer any questions you have while trying to determine whether this project should be allowed. Please do your due diligence and throughly research the aquifer use. Even the most successful in-situ mining operations have left the water worse than it was before they started and we are not willing to run any risks with our drinking water! Hollenbeck keeps saying we have nothing to loose, but he is wrong! Thank you!
the link is: [HYPERLINK "http://arcgis.sd.gov/server/denr/wellLogs/default.aspx"]

You can contact Ken Buehler at 605-773-3151

SD DENR Wells Completion Reports

Ex. 6 Personal Privacy (PP)

I am respectfully asking that you stop the Chinese mining company from ruining the black hills. The uranium mining is something we need to stop doing to our planet and we have learned too much about the damages to our fresh water sources and the damage we can cause with these practices. Thank you very much. Ex. 6 Personal Privacy (PP)

Spent the rest of yesterday sorting thru all my saved papers and documents to find the two sources that were against the project. So far I only came up with one, which (I am sure) You're already familiar with. I attached the PDF file anyway. The other info I found is incomplete and needs further research , are two names Prof. Thomas Borch and Prof. James Stone. These gentlemen did a study on the effects of ISR mining on groundwater. Contacted Clean Water Alliance with this info, maybe they can contact them easier. Will contact you when /if have more info. Ex. 6 Personal Privacy (PP)

Thank you for your response regarding deep well injection into usable and used aquifers .It is disheartening to realize how simple it is to save the water from contamination yet witness the refusal of those responsible for that water to safeguard it. Sadly, The EPA has just allowed the continuation of a poisonous herbicide/pesticide rather than remove it from use. I look forward to the hearings. Ex. 6 Personal Privacy (PP)

I would think that special consideration would be given to an area that has already shown earthquake activity and that is so directly linked to water supplies throughout the southern Black Hills.I consider this proposed project an exercise in foolishness, and considering the catastrophic outcomes that are truly possible, an endeavor with criminal intent. I would certainly hope that the EPA will be dubious of the opinions of Uzarga geologists who will suggest that their "experiment" will be 100% foolproof. The southern Black Hills honors its water supply and considers any threat to its viability a direct threat to the entire Black Hills area. With so much to lose in one of the premier recreational and tourist areas of the world, this project falls far short of any sensible consideration. Ex. 6 Personal Privacy (PP)

As this issue has been extended for quite a while now, I will not start from scratch is detailing how unacceptable is the EPA consideration to allow injection of toxic waste into usable aquifers here in south west South Dakota. I will simply bring to your attention the fact that the EPA stands for Environmental Protection Agency not "Environmental Destruction Agency". It is sad enough to consider uranium mining when there is no profit available, no safety from radiation exposure and no protection from drainage into surrounding watersheds. To purposely ruin usable, potable and important local aquifers and state water supplies is mindless at best. Ex. 6 Personal Privacy (PP)

An exemption to the Safe Drinking Water Act is being sought as part of this project. Protection of drinking water is necessary and should be a basic function of a government that is concerned with its citizens' health and well-being. If the EPA abdicates itself of this responsibility to the people of South Dakota, those people's health and livelihoods will be put at risk. It will potentially add to the burden of the healthcare system and could ultimately results in lawsuits costing the EAP millions of dollars, for which the US taxpayers will ultimately be responsible. Ex. 6 Personal Privacy (PP)

Do you drink water? Why do you want to poison ours? What should be a no brainer is a money issue, big money!!!!! Please do not sell us out, no one will be happy unless everything is poisoned. PLEASE, NO Ex. 6 Personal Privacy (PP)

Please do not grant an aquifer exemption for the UIC area permits to Powertech USA. We must protect our aquifers from contamination. They are a non-renewable resource, and contaminating them would likely have long-term consequences for humans. I object to risking a public resource that belongs not only to this generation but to future generations to come. Allowing the aquifer to be contaminated short sighted and inexcusable especially if it is for private profit. Ex. 6 Personal Privacy (PP)

Please do not grant an aquifer exemption for the UIC area permits to Powertech USA. We must protect our aquifers from contamination. They are a non-renewable resource, and contaminating them would likely have long-term consequences for humans. I object to risking a public resource that belongs not only to this generation but to future generations to come. Allowing the aquifer to be contaminated short sighted and inexcusable especially if it is for private profit. Ex. 6 Personal Privacy (PP)

I am against allowing companies to inject uranium mining waste into the aquifer. They say it is cleaned, but what if it isn't? You can't clean it up after it has been injected. Ex. 6 Personal Privacy (PP)

This is stupid. Would you inject this into water you plan on drinking? Ex. 6 Personal Privacy (PP)

Comment submitted by --an interested party who is a US citizen, taxpayer, and user of the natural resources of the state of South Dakota, including but not limited to drinking water and consuming food while in South Dakota for travel and recreational purposes.
The permitee(s) should NOT be granted a UIC permit or permits that exempt them from applicable regulations that protect human health and the environment, and that protect the quality of the aquifer in the southern Black Hills region in Custer and Fall River Counties of South Dakota, and that protect this aquifer from contamination and deterioration in quality from the disposal of mining waste into or adjacent to the aquifer.
The EPA should not grant permits or exemptions to Powertech USA that would allow disposal of uranium mining waste in or adjacent to the aquifer in the southern Black Hills region in Custer and Fall River Counties of South Dakota
Disposal of uranium mining waste in or adjacent to the aquifer will result in the release of Radioactive substances including Selenium, that will posion the animals and other life in the area. The people of the United States, including its children, need this aquifer to be uncontaminated and protected by vigorous application of criteria and regulations applicable to clean water. The EPA should determine that the aquifer is subject to safe drinking water standards. Thank you for your serious consideration of this comment. Please weigh this comment in your deliberations. Ex. 6 Personal Privacy (PP)
Ex. 6 Personal Privacy (PP)

Regarding the request to place ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment, please consider this a request to absolutely not allow this type of activity here or anywhere else in the country.
We know, regardless of the type of process used, that the threat to ground water is not worth the risk. The resulting contamination may be low level and long lasting. We should not be putting residents at risk and with no option but to prove some sort of poisoning after years of drinking the water.
Protect us! We need to be able to rely on our ground water! Ex. 6 Personal Privacy (PP)

Please do not provide an exemption for the uranium mining project in South Dakota. Aquifers are a water resource that many rely on for clean water. Protect the aquifer! Ex. 6 Personal Privacy (PP)

Please do not allow a uranium mining company to dispose of waste on a way that could pollute a SD aquifer.
Ex. 6 Personal Privacy (PP)

I am writing to provide an opinion of the exemption rules proposed for this project.
Why in the world would injecting uranium waste products into a fresh water aquifer even be considered for approval? Protect our drinking water, no matter where it is. An aquifer is not a garbage can for some mining company. Ex. 6 Personal Privacy (PP)

I am writing in regards to the draft permits and aquifer exemption for uranium mining project in South Dakota (https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemption-uranium-mining-project)
Clean and safe drinking water need to be the preeminent concerns. The proposed mining could do irreparable harm to the drinking water and should not be granted an exemption. Ex. 6 Personal Privacy (PP)

In response to request for public comment regarding dumping into an aquifer, I suggest that the book, "Living Downstream" be required reading. We cannot return to the days of having our water systems polluted and damaged for the sake of corporate or personal gain.
I have lived in an area where the rivers and water systems were polluted due to chemical dumping from byproducts of manufacturing and the long term effects remain for decades.
Please do not let this happen, I am sending a resounding no. Ex. 6 Personal Privacy (PP)

I am very concerned the EPA is considering issuing a permit to Powertech for injection activities related to a proposed uranium recovery project. Please DO NOT issue this permit and endanger our wildlife and drinking water for the citizens of South Dakota. Ex. 6 Personal Privacy (PP)

I am appalled that anyone would think this is a good idea. I am almost speechless that it would be considered by the EPA. Please do not foul any aquifers. I would go so far as to BEG you to reject this idea. Aren't we supposed to be protecting this planet? Isn't this, in fact, our only home? Do not permit this disastrous proposal. Ex. 6 Personal Privacy (PP)

There is no safe level of Uranium waste in drinking water, and you won't be able to reach safe levels of uranium waste if you are exempting an aquifer from the safe drinking water act. By that very act you are saying that the people of that area don't deserve or need safe drinking water. Ex. 6 Personal Privacy (PP)

Please do not allow the aquifers to be injected with this waste. We cannot continue to contaminate resources needed for our survival. Ex. 6 Personal Privacy (PP)

I am adding my voice to state that the above subject is unconscionable! No, to permits to inject Uranium into aquifers. Water for the future but be kept safe! Ex. 6 Personal Privacy (PP)

Please do not make these permits permanent. Dumping uranium in aquifers is a bad idea. (Just so we're clear, I'm talking about the draft permits in the portion below.) [referencing the EPA March 6 press release] Access to safe, clean, inexpensive water is a human right. Do not allow these companies to poison our planet! Ex. 6 Personal Privacy (PP)

I'm writing in regards to the aquifer exemption for Powertech Inc and their uranium disposal.
I really don't see a single reason to grant them this exemption. This will not only endanger those that rely on the water supply surrounding these well fields, but is a threat to the surrounding environment. It sets a dangerous precedent, as long as a company pays off someone high up in the EPA or current administration, they can break what ever laws and regulations they want. Be better than this EPA. Stand up for something. Ex. 6 Personal Privacy (PP)

I am writing to state my opposition to the draft Underground Injection Control Area Permits issued to Powertech Inc. for injection wells for the in-situ recovery of uranium in Inyan Kara Group aquifers. I am also opposed to the approval of an aquifer exemption, which would exempt portions of this aquifer from protection under the Safe Drinking Water Act. This exemption would set a dangerous precedent by exempting drinking water protections at the federal level. I am concerned for the health and safety of the citizens of South Dakota and Wyoming that utilize this aquifer; and for the tourists that visit the Black Hills and Mount Rushmore. Deep injection wells have the potential to leak. Ex. 6 Personal Privacy (PP)

Please do not allow Powertech or any company to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara. Putting waste, especially this type of toxic waste, into aquifers makes no sense and will lead to pollution that will have effects for generations to come. Putting short term industrial gain ahead of clean water is poor public policy. Ex. 6 Personal Privacy (PP)

I oppose both permits related to the proposed uranium recovery project in the southern Black Hills region in Custer and Fall River. Injection wells for disposing of waste fluids into aquifers is a bad idea be it trusted or not. How much control or manpower is available to oversee that the injections do not include toxic chemicals being purged into our precious water supply. The companies that dispose this way have not been overly forthright in listing the chemicals that are used in their processes. Slow moving aquifers would not be able to cleanse toxics for decades or more endangering those that

rely on the water for life. Removing these aquifers from the safe drinking water act just exacerbates the problem. We need more safe water not less. Ex. 6 Personal Privacy (PP)

I am opposed to the aquifer exemption for the uranium mining project in South Dakota. Polluting water, no matter how remote, with radioactive and toxic waste is a horrible idea. Water is life and we have a finite supply. It needs to be protected for future generations. Ex. 6 Personal Privacy (PP)

In regards to the uranium mining exemption- We must not continue to destroy our waterways and lands by allowing big business to dump wastes and bypass the protections provided by the EPA. The EPA's job is to Protect the environment although it appears that Mr Pruitt is unfamiliar with the concept. What could possibly make anyone think that allowing dumping near an aquifer would be a good idea except someone who doesn't live near by and is only concerned about making more money.
Mr Pruitt- Step up and protect the environment or step down! Ex. 6 Personal Privacy (PP)

Please do not allow an exception to regulations and let companies dump uranium mining waste in an aquifer in SD. Please protect our clean water supplies. Ex. 6 Personal Privacy (PP)

My initial thought when I heard of the proposed permits was "are they out of their minds?"
Who in their right minds would risk the drinking water for tens of millions of people, and the irrigation water of millions of acres of land for uranium mining?
I've worked in industrial hygiene and I can tell you that there's no way to make a project like this safe enough, secure enough to risk water for.
Do you realize that around the world there are major droughts happening? On at least three continents? And that has included this continent? Water is our most precious resource right now and it is not worth one penny's worth of profit to risk permanently damaging an aquifer like the one in South Dakota.
Drop this insane plan. **Ex. 6 Personal Privacy (PP)**

The long term (permanent) disadvantages of this proposal far outweigh the limited short term advantages. Please consider the future safety of Americans and our water supply before bowing down to mining companies.
The disadvantages of the in-situ leaching technology are:
the risk of spreading of leaching liquid outside of the uranium deposit,
involving subsequent groundwater contamination,
the unpredictable impact of the leaching liquid on the rock of the deposit,
the impossibility of restoring natural groundwater conditions after completion of the leaching operations.
Impacts of Uranium In-Situ Leaching
http://www.wise-uranium.org/uisl.html
Ex. 6 Personal Privacy (PP)

I would like to comment on the draft permit. I believe once an aquifer is impacted by uranium it is near impossible to clean it up. The idea that as it is in the same area as the uranium-bearing portions will lead to a legal fight that the permit holder will argue was the same levels prior to any potential release.
The contamination does not Naturally attenuate at any rate that will be successful to not have long term impact on health and human environment. Further, the type of contaminant is uniformly excluded from insurance policies that often insure these types of projects. Hence, if there is any release, the company will have to pay for the clean up and they will likely not have the financial resources to do so.
EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur. Thank you for your consideration and please do not provide the permit with SFDA drinking water exemptions. Ex. 6 Personal Privacy (PP)
Esq.

I oppose the EPA proposal that would allow for depositing uranium waste in drinking water. It is dangerous. Ex. 6 Personal Privacy (PP)

I find the use of injection wells in the Inyan Kara Group horrifying and should not be permitted. Further, this aquifer should NOT be exempted from the Safe Drinking Water Act. It is my belief that these permits should be rejected. It is my expectation that the EPA will ensure the safety of drinking water. Even though I do not live in the area, I find the fact that industry is so eager to compromise the safety of America's drinking water supplies disgusting and would not want these actions to affect the integrity of my drinking water. Ex. 6 Personal Privacy (PP)

As a concerned US citizen I would like to voice my opposition to the aquifer exemption being requested by Powertech. There is evidence that these measures would contaminate drinking and ground water and are a bad idea. As Americans we rely on the EPA to protect our citizens and environment, so please do your job. Ex. 6 Personal Privacy (PP)

I am writing to you as a concerned American regarding the proposed Draft Permits to allow UIC a permit for injection wells for the in-situ recovery of uranium in the Inyan Kara Group aquifers and a permit for deep injection wells that would be used to dispose waste fluids into the Minnelusa Formation below the Inyan Kara after treatment.
As we have seen in the past, while all precautions claim to be taken, what happens when the monitoring of the underground sources of drinking water become contaminated? It's too late then.
Also with regards to the aquifer exemption of uranium-bearing portions from the Safe Drinking Water Act. I am trying to figure out what good can be gained from this exclusion?
I am respectfully requesting that the EPA, in its infinite wisdom not grant these permits or exemptions. The Safe Drinking Water Act was put in place for a reason. Our future depends on the actions of the present. Ex. 6 Personal Privacy (PP)

This is not safe. There are no guarantees this will not contaminate the water. So let's not go there. Previously they were told no, the answer should still be no. Ex. 6 Personal Privacy (PP)

I'm sure your inbox has been inundated since the story went on twitter, so I'll keep this brief.
I am a citizen of the United States and the State of California. I feel that drinking water is going to grow significantly in importance in the near future, so I oppose any measures that threaten the safety and cleanliness of said water. I request that you deny any aquifer exemptions requested by Powertech. Ex. 6 Personal Privacy (PP)

I am writing to comment on the proposal to inject uranium waste into the Inyan Kara Group of aquifers as part of a proposed uranium recovery project. I would like to say that I am opposed to allowing uranium to be injected in these areas even after treatment.
I believe the risks to drinking water are too high. We cannot live without water. That is a biological fact. It is one of our most important resources. If there is even a slim chance that it will impact drinking water and people's health negatively, I believe it is not in our best interests. Ex. 6 Personal Privacy (PP)

The draft permits should be denied for the aquafir in South Dakota. Uranium mining waste should not be allowed anywhere near any kind of water source and dumping allowing the permits is highly irresponsible. Ex. 6 Personal Privacy (PP)

Destroying an aquifer in South Dakota to store uranium mining waste is insane when climate change is leading to water crisis around the world. Ex. 6 Personal Privacy (PP)

I read this proposed change and assumed that whomever sent this to me was pranking me. Surely the United States government would not be proposing permitting, among other things, the disposal of uranium mining materials into areas that are anywhere drinking water sources. This is unacceptable. Ex. 6 Personal Privacy (PP)

As a US citizen, I do not want Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota to be approved because of the impact on water quality in the region. Also, your email link does not work. Perhaps the parenthesis have something to do with that. Ex. 6 Personal Privacy (PP)

I am [a] High School Science teacher. I wish to express my concern for the proposed uranium extraction in South Dakota. My fear is once again money is trumping the environment! We can't keep putting our aquifers in peril for the sake of some companies bottom dollar. Our children will pay the price. Ex. 6 Personal Privacy (PP)

I was distressed to see that the EPA is considering issuing UIC Class III and Class V permits to Powertech, as well as an aquifer exemption approval. Describing this permission as "ludicrous" doesn't seem sufficient. The EPA should protect the right of people to have clean drinking water and uphold the legal protections like the Safe Drinking Water Act put in place to do this. No corporation should be given an exemption to these rules, and I oppose the granting of these permits and the exemption. Ex. 6 Personal Privacy (PP)

Allowing radioactive and other waste fluid into the aquifers sounds like a crazy idea. If there is any kind of mistake how would this be contained? I am against allowing this to happen. Ex. 6 Personal Privacy (PP)

Please do not exempt anyone from regulations prohibiting the injection of uranium et al into the aquifers.
The mining company should still be subject to the regulations in place meant to protect the water. Do your job, please (directed at the agency, not you specifically) You are the EPA for Pete's sake! Ex. 6 Personal Privacy (PP)

The potential contamination of drinking water should be avoided at all costs. Our water is a limited resource. The monitoring of the water will not prevent contamination and once contaminated the water will be undrinkable and taste bad. How did uranium become more valuable than our drinking water? Stop all drilling and other activities that will or has the potential to contaminate our water supply.
What happens when the injection material gets into the aquifer? Will the companies pay to clean it up or does that fall on tax payer to clean up their mess. No to any and all drilling, mining, pipelines with the slightest potential to contaminate water. Ex. 6 Personal Privacy (PP)

In regards to the below *[reference to the title of the EPA press release*], I am against both the uranium mining and most especially exempting the company from regulations on safe drinking water. That sounds like a bad idea for public health. Ex. 6 Personal Privacy (PP)

I am writing to submit my resounding opposition to these careless acts of environmental injustice. Dump uranium into aquifers??? How is this policy even possible with all the water quality problems in places like Flint, MI and Hoosick Falls, NY? Ex. 6 Personal Privacy (PP)

I am writing to state my opposition to the draft Underground Injection Control Area Permits issued to Powertech Inc. for injection wells for the in-situ recovery of uranium in Inyan Kara Group aquifers. I am opposed to the approval of an aquifer exemption, which would exempt portions of this aquifer from protection under the Safe Drinking Water Act. This exemption would set a dangerous precedent by exempting drinking water protections at the federal level. I am concerned for the health and safety of the citizens of South Dakota and Wyoming that utilize this aquifer; and for the tourists that visit the Black Hills and Mount Rushmore. Ex. 6 Personal Privacy (PP)

Please know that issuing these permits is a bad idea and I am formally against this plan as it would further threaten underground water sources and drinking water. Ex. 6 Personal Privacy (PP)

Do not allow this to go through. Unless you all are willing to drink the potentially at risk water that is subject to contamination by this would be effort. It reminds me of a scene from the Erin brokovich film where the folks from PG&E were given the water they sweared was not contaminated in mediation to drink but once that little detail was mentioned, nobody wanted to touch let alone drink the water. Ex. 6 Personal Privacy (PP)

I strongly oppose injecting, any material, into or around any aquifers. Particularly waste materials from uranium clean up projects. I request public hearings on this issue before any funds are diverted to those ends. Ex. 6 Personal Privacy (PP)

I vehemently oppose the release of the waste from uranium mining into the SD aquifer. Providing an exemption for such action endangers the water supply and public health. I urge the EPA to refuse the requested. permission. Ex. 6 Personal Privacy (PP)

I believe this proposal is reckless. I understand there are monitoring for ground water, but there are never any guarantees the water won't get contaminated. I am sad that protecting the environment seems to no longer be the focus of the EPA. I hope you do the right thing here and reject this proposal. Ex. 6 Personal Privacy (PP)

No uranium near aquifers, anywhere and certainly not in SD. Ex. 6 Personal Privacy (PP)

Given that the injection wells for these draft permits are occurring IN an aquifer, it would seem obvious that no matter what precautions the applicant has indicated, they will not be sufficient enough to prevent these aquifers and waterways from being polluted with nuclear and toxic wastes. I again state my objection to these draft permits being approved. Ex. 6 Personal Privacy (PP)

I'll keep this simple. Don't do anything to contaminate the aquifer in South Dakota. Nevada's water issues with surface level fallout is bad enough. Ex. 6 Personal Privacy (PP)

Subject: Mine waste injection in aquifer
The words in the subject line for this message should never be found in the same sentence!!!
Of course it is wrong to put mine waste, which is usually a higher concentration of natural materials, into any area from which water is drawn for use by humans and animals! I am disgusted that our federal agency that is tasked with protecting our natural environment would consider a course of action that endangers our most precious resource, potable water. It is irresponsible to poison, or threaten any aquifer. Please do not allow this proposal to be permitted. Those who produce these waste materials need to devise better methods of disposal. Ex. 6 Personal Privacy (PP)

I am writing this email to express my concern for the proposed uranium mining project in southwestern South Dakota. My concerns are mainly for future generations and the of course the environment.
Coming from both a scientific background and from an Indigenous background, I urge you to deny this project in whole. Seeing and living the long term effects of uranium mining in my own community as well as on my reservation, I have seen and experienced all the negative impacts uranium mining has on both people that live in close proximity as well as the environment surrounding the mines. I personally seen the destruction to the land, the air and especially the water. My research is focused on finding a solution to the water contamination by uranium, arsenic, sulfates and a number of other metals/elements of concern. Uranium chemistry is very complicated and it is difficult to imagine the environmental impacts by this proposed project. Though I feel optimistic that we are closer to solving a portion of the problem, it will cost more to remediate a contaminated sites in the future which is inevitable. I am deeply saddened of this news and I sincerely hope that this project is not allowed to move forward. Ex. 6 Personal Privacy (PP)

I can't get on the USGS site to find the geologic maps of the relevant area; however, can you please comment on the potential for connectedness between the proposed injections into the Minnelusa Formation and the Madison formation which provides a prolific source of clean drinking water for the nearby City of Gillette. Ex. 6 Personal Privacy (PP)

Without doing a thorough assessment of the draft permits, just the concept of any exemption on aquifer requirements for Uranium mining seems crazy! As far as the details of the regulations I hope they are based on solid science and the need to proteck our environment (and especially drinking water) from long term hazardous contamination, but not knee jerk "anti-nuke" sentiments. In the past I've trusted the EPA to make sure judgements, hopefully this is still the case.
Ex. 6 Personal Privacy (PP)

It is time to stop injecting poisons into our earth for the sole purpose of a business venture to extract minerals for profits. The future cost of poisoning aquifers is beyond calculation. Once injected, those poisons are at the mercy of geologic forces which humans cannot control and will eventually contaminate clean water. The benefit to one business enterprise is simply not the risk to the human race, the plants, the animals, the water and the air. No method of containment can insure protection. The simple answer is "NO MORE POISON SHALL BE INECTED INTO THE EARTH."
Ex. 6 Personal Privacy (PP)

Absolutely no exemptions for groundwater contamination, whether from uranium, or any other foreign (non-H20) substance. We (U.S. EPA) must prohibit any contamination of water, whether they are ground water or surface waters.

https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemption-uranium-mining-project Ex. 6 Personal Privacy (PP)

Are you people out of your goddamn minds? No it is not okay to dump that kind of waste into an aquifer that people use to wash their clothes, cook their food, brush their teeth and serve to their families. Ex. 6 Personal Privacy (PP)

I'm writing to oppose the Underground Injection Control permits to Powertech as well as the aquifer exemption. I'm relatively new to this concept and am no environmental scientist - but is injecting uranium recovery waste near a source of drinking water common practice? Seems like a really bad idea. And the request for exemption from the Safe Drinking Water Act suggests that Powertech thinks it may not work out so well, too. Please don't approve this. *Lisa Cave*

And the International Physicians for the Prevention of Nuclear War passed a resolution in 2010 <http://www.ippnw.org/pdf/2010-resolution-uranium-ban.pdf> calling for a ban on all uranium mining worldwide, which states that "As well as the direct health effects from contamination of the water, the immense water consumption in mining regions is environmentally and economically damaging – and in turn detrimental for human health. The extraction of water leads to a reduction of the groundwater table and thereby to desertification; plants and animals die, the traditional subsistence of the inhabitants is eliminated, the existence of whole cultures are threatened."
America's "Secret Fukushima": Uranium Mining is Poisoning the Bread Basket of the World
By Margaret Flowers <http://www.globalresearch.ca/author/margaret-flowers> and Kevin Zeese <http://www.globalresearch.ca/author/kevin-zeese> Global Research, June 07, 2013 Ex. 6 Personal Privacy (PP)

Have you lost your minds? If your goal is to poison the citizenry, I suppose depositing these materials into an aquifer would be a good way to accomplish that. Do you know what an aquifer is? Do you know that ground water from many sources ultimately reaches and recharges aquifers? In the South Dakota region, almost everyone I know drills deep wells into aquifers for drinking water.
Question 1: precisely what is the identity of the designated aquifer?
Question 2: what makes you think any aquifer can be protected from any material that might be deposited into the ground?
Definitely oppose this plan. Ex. 6 Personal Privacy (PP)

Please deny the permits for injection activities related to the proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. Please do not allow uranium mining waste disposal in the South Dakota aquifer. Ex. 6 Personal Privacy (PP)

I read an article that stated the EPA is potentially approving uranium mining waste to be injected into an aquifer which contains drinking water. This is one of the most absurd things that I've ever heard. This is a topic that even Commedia dell'arte would think too odd to even be considered in comedy. Uranium eventually (over a very long term) degrades into lead. Do you remember what happened with Flint, MI? I know that Pruitt is in charge of the EPA now, but have a backbone and say no. Or, make him drink that water after waste injection. Seriously, who thinks that this is a good idea? Is it worth it for someone to rape the earth for their own profit? Ex. 6 Personal Privacy (PP)

I am taking the time to voice my opinion that underground injection should NOT be allowed. Water is precious and the continuing pollution of our aquifers by corporations is criminal. This practice affects all of us and we have a right to be protected from harmful acts of a few. Please deny this practice, protect water because none of us can survive without it!
Ex. 6 Personal Privacy (PP)

I am writing to strongly oppose injecting uranium mining waste into an aquifer! I oppose the aquifer exemption. People depend on clean water for life! Until this current administration, the EPA mandate was to protect the environment, not pollute it. Please reconsider. Ex. 6 Personal Privacy (PP)

I am opposed to the extraction of Uranium in South Dakota. If Ivanka Trump is going to drink the test water in front of a live audience, I might be convinced to change my mind. I would want her and her children to return weekly and drink and bathe in the water to prove it is safe. Write that into the agreements. Ex. 6 Personal Privacy (PP)

This is without a doubt the worst idea ever! You put scores of thousands of people at risk without clean drinking water. The contamination of those aquifers will result in another Chernobyl in human loss. Please do not grant exemptions. Ex. 6 Personal Privacy (PP)

RE: EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota.
I am writing as a concerned citizen regarding the recently announced application for exemption from what can only be called sensible guidelines for the protecting of a water aquifer. The potential for water contamination by uranium must be taken very seriously, particularly given the long term threat posed to not just human life, but all life, such as the increased rates of cancers due to increases in mutation rates. As I am sure you know, this potential for environmental damage is exacerbated by the presence of nitrates, which are practically ubiquitous in just about every region of the US. I strongly urge the EPA, the guardians of our environment, not to approve such a blatantly dangerous exemption.
Ex. 6 Personal Privacy (PP)

My opinion - NO, Never this shouldn't even be a question. At what point would you think that an element that renders large swaths of land unlivable (plenty of examples to research) would be okay to dump into an underground aquifer where most people are probably living on well water. Just to reiterate my answer is NO. Ex. 6 Personal Privacy (PP)

I strenuously object to the exemption requested by the uranium mining company to permit uranium mining waste disposal in a SD aquifer. Aquifers are pristine sources of water, and contamination cannot be reversed.. The regulations already in place to prohibit this need to be followed. Our health takes priority over the financial interests of this company. Ex. 6 Personal Privacy (PP)

Water is quickly becoming our most valuable natural resource. The potential damage to the aquifer will be irreparable.
Ex. 6 Personal Privacy (PP)

This activity will poison the water supply. People cannot live without clean water. I oppose granting these permits.
Ex. 6 Personal Privacy (PP)

The EPA must not allow Uranium mining waste to be disposed of in a South Dakota aquifer, or any aquifer for that matter. We cannot risk the further contamination of our underground water systems. Ex. 6 Personal Privacy (PP)

Please don't allow uranium waste to be injected into the aquifer. Don't we have enough environmental problems already? Isn't it bad enough that Scott Pruitt is now head of the EPA? Ex. 6 Personal Privacy (PP)

No it's not OK to dispose of uranium in an aquifer - in South Dakota or anywhere else. That is our water Ex. 6 Personal Privacy (PP)

I think the job of EPA is to protect aquifers, not provide exemptions to companies that want to extract hazardous substances near water supplies. This is a continuation down the path of environmental degradation and a lack of concern for local drinking water. Please don't issue the permits. Ex. 6 Personal Privacy (PP)

I am a member of the public who would like to comment on the proposed permits for injecting uranium into the ground near a SD aquifer. This is an extremely and astonishingly bad idea. I understand that the uranium would be ostensibly treated to be made safe before injection. Still: no. Really, adamantly, no. I understand that the water would be monitored for safety throughout the process. Still: no. Completely and emphatically no. What happens when the water in the aquifer is found to be contaminated? How long would the remediation process take, if it's even possible? I understand that you are an actual person showing up for work every day, just like me, and I appreciate that at times like this, it is probably a mostly thankless job. I can only hope that opposing opinions to this idea, like mine, are genuinely counted and can have an impact in stopping this harebrained proposal. You would indeed be thanked for advocating for the public who is contacting you with our concerns. Ex. 6 Personal Privacy (PP)

Are they insane? Let's pollute the aquifer that drinking water comes from? Ummmm no way. Ex. 6 Personal Privacy (PP)

I can't even begin to express how vehemently I oppose allowing uranium mining waste to go into an aquifer in the black hills. Obviously, no aquifer should be abused in this manner, but having grown up in spearfish, SD, the idea sickens me that much more. Please don't let this happen! Ex. 6 Personal Privacy (PP)

Allowing this into a South Dakota aquifer -- or into groundwater anywhere is pure insanity. Poisoning the earth to enrich extractive industries should be punishable by jail. Think, EPA, think! Ex. 6 Personal Privacy (PP)

I am writing to comment on this proposal. I am a tax paying citizen who works hard as does my husband to provide a safe living environment for out children to grow. It is not much of a stretch to infer that there are thousands of others just like us in the area where you propose to inject radioactive waste near the fresh water aquifers. Yes, I know the mines are required to treat the waste & continue to monitor it after its disposal, but that is absolutely unacceptable. Absolutely, 100% UNACCEPTABLE. The material in question will certainly impact the groundwater as well as all the living things in the immediate area. Ex. 6 Personal Privacy (PP)

I believe that there should be no Uranium mining waste injected anywhere near a aquifer. Bad idea! Don't do it.
Ex. 6 Personal Privacy (PP)

I just wanted to express my opinion on the above subject. I think it would be a horrible idea with an adverse impact on the ground water. I also believe it would be detrimental to the environment of Black Hills. Please do not permit this and thank you for being interested in the public's opinion. Ex. 6 Personal Privacy (PP)

EPA asks public for permission to allow Uranium mining waste disposal in SD aquifer: No. Must abide by regulations, and ideally common sense. Ex. 6 Personal Privacy (PP)

Please do not permit Powertech an exemption to dump uranium into the aquifer system in South Dakota. Water sources must be protected from contamination. Ex. 6 Personal Privacy (PP)

I've read about the draft Powertech permits, and urge you to stop both. Water safety must beer one of three EPA's highest priorities. Reject these permits, please. Ex. 6 Personal Privacy (PP)

Please don't destroy the aquifer in South Dakota with uranium mining waste disposal. Ex. 6 Personal Privacy (PP)

I am writing to oppose the proposal to allow infection of waste products from uranium mining near underground aquifers in South Dakota. This proposal is dangerous and threatens clean drinking water for a large number of people. The benefit from the proposal is negligible. Ex. 6 Personal Privacy (PP)

I would like to voice my opposition to the draft permits and proposed aquifer exemption associated with the work to be done by Powertech, Inc. Further, I would oppose any work that threatens to contaminate our aquifers or otherwise alter them from their natural state. Ex. 6 Personal Privacy (PP)

Does this paragraph actually state that despite the comments about treating the water in the preceding paragraph that you are requesting an exemption from treating it?
What waste products are in this water? And who owns these uranium recovery mines?
"EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur."
Thank you for answering my questions. Ex. 6 Personal Privacy (PP)

I oppose the allowance of these mining permits, as they endanger the drinking water in nearby areas, as well as intrudes on Indigenous-owned spaces. Ex. 6 Personal Privacy (PP)

I am writing to register my opposition to the granting of permits and exemptions to the Safe Drinking Water Act for Powertech's proposed uranium mining in South Dakota.
The Safe Drinking Water Act is a crucial means of protecting an irreplaceable resource used by local tribes and other residents. Granting exemptions to this Act so that a private company can reap financial rewards is wrong. There is NO safe amount of uranium that can be injected into an aquifer.
i call upon the EPA to do its job in protecting the environment and its inhabitants.
Do NOT GRANT this permit and exemption. Ex. 6 Personal Privacy (PP)

No radioactive material must be allowed into our aquifer at any time. Ever. Radioactive material is hazardous to all life forms. This is an abomination. NO. NO. NO. That is my input as a member of the public. Once again: NO. Ex. 6 Personal Privacy (PP)

No permits, exceptions whatever! Water is life. I was alive during the time of the Times Beach Dioxin pollution, EXXON MOBIL Valdez and Deep Horizon. I also am a student of the problem with Chevron extracting oil, Etc in the previously pristine Ecuadorian Forest 30 years ago and leaving those poor natives with a mess from that process. The natives of had an ongoing legal dispute to get remedies for 25 years!!! Please stop insulting our intelligence!! I am a retired RN I have a BSN from major University and I practiced in Healthcare Management for 30 years. Don't reinvent the wheel. Healthcare has proven that PREVENTIONis a million times better than trying to treat the disease once you get it.
Don't let these big companies make profit by destroying our public resources such as water in the aquifers and above ground on the land and in the water and the air. What don't you get? Your grandchildren and great-grandchildren are going to be around during this time in the future and they'll be the ones having to deal with this if we don't stop it before it starts. You cannot eat, drink and breathe CASH 💰 💰 💵 💵. Do you not remember the rivers being on fire back in the sixties and seventies and the Erie Lake almost being dead from pollution? REMEMBER SMOG????? Ex. 6 Personal Privacy (PP)

I am concerned that permitting uranium extraction and allowing ANYTHING from this process to be put into a clean water supply will contaminate it and make it dangerous for people to drink. Water is becoming scarce and we must keep what we have safe and protect it from dirty industries. I and many other environmentalists will be extremely disappointed if you allow this to occur. Ex. 6 Personal Privacy (PP)

Per the EPA request for public comments on this permitting process for this project:
The risks to the aquifer for a private corporate enterprise are too high risk to be permitted.
If the aquifer is contaminated there is no method to remove the damage. As water is required for public consumption and agriculture uses that also evolve into public consumption this is an unacceptable risk. This new mining scheme provides no benefit to the local or regional community but poses a significant and permanent risk to the water system and environment of the region in question in western South Dakota. Ex. 6 Personal Privacy (PP)

I absolutely oppose allowing Uranium mining waste disposal in SD aquifer. We must protect our environment. Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)

Please do not allow waste disposal in South Dakota's aquifer. That is ridiculous to consider contaminating the water supply with nuclear waste. Please stop!! Ex. 6 Personal Privacy (PP)

I strongly oppose the proposition to allow injection of "process waste fluids" into the Inyan Kara Group aquifer. I am not confident in the safety of such an action under ideal circumstances. Our current administration's lack of interest in environmental issues only deepens those concerns.
I am not comfortable with this action. The presence of monitoring is an admission that contamination can take place. If such contamination occurred, it would not be possible to thoroughly remove it. The aquifer would be tainted. Drinking water is one of our most valuable resources. There are already too many dangers facing our current sources. Deliberately and consciously endangering these resources any further is simply ludicrous. The dangers are too real and too costly. This cannot be allowed to happen. Ex. 6 Personal Privacy (PP)

I am writing you to give you my opinion about dumping uranium waste from mining in South Dakota in aquifers. It would seem that common sense would answer this question for you and no poll would need to be taken. So I ask you this,

would you drink a glass full of water with uranium mining waste in it? Would you give uranium waste to your children, or grandchildren to drink or wash in? Would you water your vegetable garden with it? Would you give it to your livestock? Would you eat meat, take eggs, or drink milk from livestock fed on uranium waste?
Water does not just sit idly and obediently by where you dump it, it seeps, moves, and goes where it wants. There is not a surface or substance on this planet it cannot wear its way through. What you are asking people for is permission to pollute drinking water for eternity for a few dollars in profit for corporate bosses, who don't have to drink the water they pollute.
The answer is no, don't do it. Don't exempt aquifers from the Clean Water Act. That you are even asking tells me you KNOW you will be polluting for generations to come, in which case, I say shame on you. Stand up for what is right here, for what is good, for what is best. Don't let corporate polluters make a disaster site for America. Don't kill people, don't give us cancer, don't hurt us.
It is the job of the government to protect and serve the people of this country. Dumping uranium waste into aquifers is counter to all that entails. Ex. 6 Personal Privacy (PP)

I'm responding to the EPA Region 8 draft proposals mentioned in https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemption-uranium-mining-project
I was particularly alarmed by the language that "EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur."
As a citizen sympathetic to my fellow citizens pursuing such activities as "drinking and otherwise using water without it increasing the likelihood of cancer and poor health" I highly object to this exemption approval. If the Class III Area Permit is in an area vulnerable enough to require such review, then such review is a vital part of the process and should not be simply discarded out of convenience. Ex. 6 Personal Privacy (PP)

Please don't dump waste where people get their drinking water. This could hurt our environment or kill someone and bring about preventable suffering. It's supremely irresponsible and shortsighted. This kind of treatment of our water and lands makes the United States look barbaric and ignorant. I don't support these draft permits and exemptions. Ex. 6 Personal Privacy (PP)
Ex. 6 Personal Privacy (PP)

@@Concerns for impacts to Native Americans/the sacred Black Hills

We demand:
1) no permit
2) clean up old mines
3) tribally defined consultation
4) full tribal approved surveys
5) Lakota translation/transcription
Thank you, Ex. 6 Personal Privacy (PP)

Public comment on uranium mining in the Black Hills
In considering uranium mining in the Black Hills, I urge the EPA to consult with the Sioux nation before any action, to conduct tribally approved archeological and cultural surveys, and to have a Lakota translator/transcriptionist present at all hearings. Thanks, Ex. 6 Personal Privacy (PP)

Black Hills
Dear U.S.,EPA Region 8, I am asking for no uranium in treaty territory. I am asking for a strong no to the Dewey Burdock Uranium in the Black Hills. No, to this whole thing. Very Sincerely, Ex. 6 Personal Privacy (PP)

No uranium mining Dewey Burdock! To whom this may concern, I am writing to support native Americans in there opposition to the Dewey Burdock uranium mining of the black hills territory ! Ex. 6 Personal Privacy (PP)

PLEASE remember to have a tribally defined consultation in addition to FULL tribally approved archeological and cultural surveys !!! A translator would also be helpful during court. Thank you, Ex. 6 Personal Privacy (PP)

STOP URANIUM MINING IN THE BLACK HILLS As a 7th generation Oglala Lakota born and raised on the Pine Ridge Indian Reservation, I grew up spending whole summers in the black hills, it is my home. Although I currently live in so called Denver, CO I consider the He Sapa and all over South West South Dakota as well as the North Eastern Parr of Wyoming my Ancestral Home. Stop Mining our Sacred Hills, leave the Uranium in the Ground. When the mother earth dies you scientists enginers and natural gas / oil field workers will all die a slow painful death. You will watch your family's and loved ones suffer from lack of clean air and die from poisoned water. This has been explained many times, there are many individuals who can attest to and bear witness the harmful destructive effects this uranium mining has had on our land, water, and health. All over the world the extraction of oil natural gases and minerals is killing our world, killing eco systems and environments that have flourished for centuries upon centuries. These eco systems are apart of what makes all life possible. Our existence depends are a very very delicate balance. When mother earth dies there will be no place for the ultra rich to hide. No bunker can withstand the Natural Powers of the Universe. No doomsday shelter will protect you. As for told by many spiritual leaders Sha men and your very own bible describes this in revelations. Please the world pleads with you to stop, stop ! Stop uranium stop big oil, stop natural gas, stop tar sands, stop coal bed methain. Stop coal.

Thank you Valois and I'm sorry that I missed your call.
I would very much like to tell you why I'm interested in this area , but first I would like you to know that I'm not running for office , nor do I want to pull a Erin Brockovich...take on a big corporation ...win ...and then have a movie made about me. I just want to help. The Dewey-Burdock in-situ recovery site is here , and even if God came down and shut the operation down...we would still have to put everything somewhere else. I would like to learn as much about the history and the current conditions as I can to see if there is anything that I can do to help. If you know of a good archive...if you know of a good contact , I would appreciate getting them . As far as you are concerned , what needs to be done there ?
Thank you very much Ex. 6 Personal Privacy (PP)

This email is in response to the notice received for comments on the EPA Region 8 Underground Injection Control Program-Permits for Proposed Dewey-Burdock In-Situ Recovery Site.

I am requesting proper 106 consultation. We are currently reviewing all documents that are available online.
If you have any questions, please contact me.
Thank you, Ex. 6 Personal Privacy (PP)

If you can send me any information pertaining to any activities on Treaty Territory of 1851 and 1868 Fort Laramie Treaties.
I understand there is some activity with uranium mining.
I also request that you make me part of the notification list for tribes. Our organization is chartered by the Rosebud Sioux Tribe to oversee treaty related issues and report back to our tribal council.
Thank You for any assistance. Ex. 6 Personal Privacy (PP)

I grew up in Gallup, NM which is surrounded by reservation and Native American sites. My home was on w66, west of town. We moved out there in 83 but my mom had lived on the property as a young child. We are not Native but have respect and love for the different Native cultures.
I watched Twin Buttes, year by year become a hill of rubble. When I see pictures from the 50's and 60's of how beautiful it was I am sad, angry and frustrated. I implore you to do the honorable and environmentally responsible thing and refuse to allow more Native American sites, land that we all love and need, to be destroyed for capitalism and greed.
Ex. 6 Personal Privacy (PP)

This is unacceptable. permits to mine uranium in the southern Black Hill should be denied! Putting poison water in to the ground should never be permitted .....The Black Hills, the heart of everything that is. The 1868 Fort Laramie Treaty was ratified by Congress and was never amended. Under international law it is Native land. "The laws of the United States, the NRC regulations, and the individuals who sit behind those desks can honor treaty law, the life way of the Lakota, environmental laws, and demonstrate respect for Mother Earth by denying application to mine uranium." Ex. 6 Personal Privacy (PP)

Hello. I am writing to express my opposition to the Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota.These aquifers belong by treaty to the Lakota Sioux people, who have been working toward the return of their ancestral lands. It is a matter of moral outrage that the lands were taken to begin with; poisoning the water there with mining waste which is inevitably left after "restoration" is unacceptable. Thank you for your time and attention to this matter. Ex. 6 Personal Privacy (PP)

No uranium mining in the Black Hills. Uranium mining of the Black Hills is an assault on Native sovereignty, and an environmental disaster in and of itself, even if it goes as planned. Please do not allow this to happen. Please respect this important religious, cultural and historical site. Ex. 6 Personal Privacy (PP)

I was told the reason you scheduled a meeting in Valentine on April 27, 2017 at Niabrara Lodge is so the two reservations in South Dakota would have a place to comment. It isn't going to happen. If you truely want comments from the two reservations, you will have to hold them on the reservations. Contrarely, to public knowledge, the reservations have modern hotels and large public meeting places on the reservations. In fact, Rosebud has a very modern hotel and meeting rooms, just twelve miles north of Valentine at the state line of South Dakota. Because they are not welcome in Valentine, unless they come in the daytime to spend their money. Yes, discrimination is alive and well in the Untied States, before Trump started spewing his hate on us. Ex. 6 Personal Privacy (PP)

There should not be any mining in the Black Hills. US Treaty clearly states this is Native land. A Sovereign Nation. Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)

Please do not continue with these draft permits and aquifer exemption for uranium mining in the Black Hills. These are the tribes land. All protections should be done to protect these lands and water from ever having any mining on them. It is not necessary. Why should any exemptions be made?. This land is owned by the tribes and should be treated just like any other private land. The water should be protected from contaminants at all cost. No mining should be allowed. Mining in and of itself is not a guarantee of safe clean water no matter how many precautions are made. I am against any mining permits or aquifer exemptions for uranium mining in the Black Hills or anywhere. Ex. 6 Personal Privacy (PP)

Uranium mining of the Black Hills is not only an assault on Native sovereignty over a religious, cultural, and historic site for many Nations, but uranium mining is an environmental disaster itself, even if it all goes as intended. Ex. 6 Personal Privacy (PP)

Please be advised that I am hereby submitting my comments regarding the draft permits on Dewey-Burdock insitu mining.
An enrolled member of the Standing Rock Sioux Tribe, I disagree with any mining on our treaty lands, and jeopardizing the aquifers from which the Great Sioux Nation (Oceti Sakowin) receives drinking water. For your information the Oceti Sakowin is made up of seven councils of recent history. .
I do not want any further degradation of our waters encompassing current tribal needs, namely the Pine Ridge, Cheyenne River, Standing Rock, Rosebud, Lower Brule, Crow Cree, Sisseton-Wahpeton, and Santee Sioux, Flandreau, and Yankton reservation lands and waters.
I do not want any other peoples health jeopardized as well, i.e. all of the South Dakota, North Dakota, Montana, Wyoming, and Nebraska states populations. Ex. 6 Personal Privacy (PP)

"Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Under its obligation to comply with the National Historic Preservation Act and under EPA's Tribal Policy on Consultation and Coordination with Indian Tribes, EPA has been consulting and coordinating with several interested Tribes to identify the potential effects of the proposed project on traditional cultural places, historic and sacred sites."
- these are your own words in the press release and it should answer the question.. Please!!! Leave Native Lands Alone!!! haven't we given them the short end of the stick enough?!? Ex. 6 Personal Privacy (PP)

This is court sanctioned murder of the native people in Black hills. You have stolen their children, taken their land and now you are polluting their water Ex. 6 Personal Privacy (PP)

I am writing to oppose the plan to dump wastes from uranium mining under the aquifer in S. D. This is not wise from many standpoints. Once again our Native American tribes are threatened with a real risk to their drinking water. Ex. 6 Personal Privacy (PP)
Ex. 6 Personal Privacy (PP)

NO! Leave the sacred Black Hills alone Ex. 6 Personal Privacy (PP)

All responsible Americans must oppose additional uranium mining in South Dakota, especially injection mining. The United States has already polluted hundreds of thousands of acres of Indian land, hundreds of miles of waterways, and the air and wind above them. Not only cattle, but also wildlife and HUMAN BEINGS drink the polluted waters and suffer illness and death as a result.
I urge the EPA to deny these mining permits being applied for. Ex. 6 Personal Privacy (PP)

I oppose the allowance of these mining permits, as they endanger the drinking water in nearby areas, as well as intrudes on Indigenous-owned spaces. Ex. 6 Personal Privacy (PP)

I belong to the Intelligentsia. The half life of uranium is 4.5 billion years! You cannot bribe us with short-term job security!!! The white men from Europe have already stolen the whole of America from the original Aborigines who lived here and almost committed genocide on their population. Now you want to go and commit more pollution and ravage their land so it's uninhabitable forever. Have you no conscience?? Even considering this proposal is absurd! Ex. 6 Personal Privacy (PP)
Ex. 6 Personal Privacy (PP)

It is my understanding that the EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. I strongly urge you to reconsider any decision to allow permits to mine any region that impacts Native American lives. We all know how Native Americans are considered second class citizens in this country; how their lands are up for grabs; and how their health is not as important as expanding drilling for oil,

uranium, copper and so on. These substances are not for consumption here (not that this would be acceptable) but to enrich the companies that sell them overseas. Please do not continue to perpetuate these injustices and do not approve any draft permits or any aquifer exemption. Ex. 6 Personal Privacy (PP)

The proponents of this action love nowhere around such toxins & frankly do not care who is affected... especially since the residents are Indians, poor, & sorely disenfranchised, & poorly educated for the most part. This proposal is a disgrace to the country & evidences a deep disregard for the citizens in general, not just the Black Hills residents. Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

@@Concerns about uranium ISR

"Current uranium mines have a history of noncompliance <http://www.earthworksaction.org/files/publications/Nuclear-Power-Other-Tragedy-low.pdf> with regulations. There continue to be spills. Mining corporations do not clean up areas that they are required to clean up. They do not pay fines. And they influence local governments to loosen requirements once they receive a mining permit.
In addition to contamination of land, air and water, uranium mining, particularly in situ mining requires large amounts of water. In the current environment with extended droughts and reduced aquifers, in situ mining places greater strain on the water crisis. Ex. 6 Personal Privacy (PP)

@@Against uranium mining in general

The mines for uranium have been [unreadable] an environmental disaster. These will be, too.
Ex. 6 Personal Privacy (PP)

Uranium has no good place in our future – it is a failed industry – do not mess with it!!! Ex. 6 Personal Privacy (PP)

Mark me in as opposed. We have more than enough uranium stored and we should never have let the Clinton's sale 20% of our supply to the Russians. Is this permit being issued to a foreign entity? Shame on the EPA! I hope President Trump drastically reduces the EPA!!! Ex. 6 Personal Privacy (PP)

I oppose the draft permits and aquifer exemption for uranium mining in southwestern South Dakota. These are our public lands and uranium mining should not sully our national treasures. I wholeheartedly oppose any such mining on our public lands. Ex. 6 Personal Privacy (PP)

@@Concerns about effects of past uranium mining

uranium :(
PLEASE stop the Uranium in the Black Hills! PLEASE do not issue any permits PLEASE clean up old mines (reclamation) before any further permits are ever considered !! DO you really not understand the importance of cleaning this crap up? Ex. 6 Personal Privacy (PP)

Dewey-Burdock is on private land owned by ranchers who distrust the government and the EPA, so has never been properly checked for contamination or cleaned up. Ex. 6 Personal Privacy (PP)

I live in Grants, New Mexico, the former self proclaimed "Uranium Capital of the World". As a now retired RN, I can tell you of the many deleterious effects of Uranium Waste. Years after closure of the mines here we are still dealing with illnesses and deaths from uranium, and the water and environment are still not cleaned up, and won't be. Allowing uranium mining waste disposal in a SD aquifer is an absolutely horrible idea unless you blieve is is a good thing to poison people, give people cancer...please, NO. Ex. 6 Personal Privacy (PP)

I am writing to OPPOSE approval of the permits that would allow "injection wells for the in-situ recovery (ISR) of uranium in the Inyan Kara Group aquifers and ... deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class III injection wellfields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected."
"EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur."--News Release from EPA Region 8
Anyone who is familiar with South Dakota's recent history knows that uranium mining has caused radiation poisoning on the Pine Ridge Indian Reservation since at least the 1960s. The Cheyenne River that runs through the reservation is

dotted with radiation warning signs that say "Caution – Nuclear Radioactive River." The uranium waste has not been cleaned up from the last spate of uranium mining. Why should the EPA permit this again? Uranium tailings and wastes pose a significant health risk for thousands of years into the future.

Today, key water supplies dotting the Pine Ridge reservation carry arsenic, alpha radiation and other contaminant levels up to 18 times the legal limit, according to water tests conducted by Energy Laboratory, an independent, EPA-certified analytical laboratory in Rapid City, S.D. Fifty-eight percent of the private wells, springs and soils tested on Pine Ridge in June and July 2009 showed positive results for contamination by arsenic, lead and/or various forms of radiation.

Local wells that tap into the Inyan Kara aquifer already have levels of alpha radiation above the EPA's Maximum Contaminant Level. "The portion of the Cheyenne River Basin that lies in southwestern South Dakota drains about 16,500 square miles within the boundaries of the state. The area in this basin includes part of the Black Hills and Badlands, rangeland, irrigated cropland, and mining areas. After traversing the western half of the state from southwest to northeast, the Cheyenne River flows into Lake Oahe, a reservoir on the Missouri River.

"Previous efforts remove the radiation in the water at Red Shirt have been unsuccessful. Drinking water is piped in, or residents must drive 25 miles to the little town of Hermosa to buy water. The Cheyenne River has dried up approximately one mile from Red Shirt and tests of the river bottom soil by Defenders of the Black Hills are pending. Initial tests using a Geiger counter revealed more than double the amount of normal background elevations for radiation." Uranium Mining Poisons Native Americans, article by Jeff Gerritsen, 25 Feb 2009.

http://www.culturechange.org/cms/content/view/336/65/

I reproduce below the Fact Sheet prepared by Charmaine White Face in 2006.

Uranium Mining and Nuclear Pollution in the Upper Midwest: F A C T S H E E T America's Secret Chernobyl

By Charmaine White Face, Coordinator

Defenders of the Black Hills

1. Uranium mining in South Dakota, Wyoming, Montana, and North Dakota began in the middle of the 1960s. World War II, which ended with the nuclear bomb, introduced the use of nuclear energy for the production of electricity and caused the price of uranium to rise. As the economy of the Midwestern states depends primarily on agriculture, when uranium was discovered in the region, many get-rich-quick schemes were adopted. Not only were large mining companies pushing off the tops of bluffs and buttes, but small individual ranchers were also digging in their pastures for the radioactive metal. Mining occurred on both public and private land, although the Great Sioux Nation still maintains a claim to the area through the Fort Laramie Treaties of 1851 and 1868.

2. In northwestern South Dakota, for example, the Cave Hills area is managed by the US Forest Service. The area currently contains 89 abandoned open-pit uranium mines. Studies by the USFS show that one mine alone has 1400 mR/hr of exposed radiation, a level of radiation that is 120,000 times higher than normal background of 100 mR/yr. There are no warning signs posted for the general public anywhere near this site! It is estimated that more than 1,000 open-pit uranium mines and prospects can be found in the four state region from a map developed by the US Forest Service.

3. The water runoff from the Cave Hills abandoned uranium mines empties into the Grand River which flows through the Standing Rock Indian Reservation. Three villages are located on the Grand River and their residents have used the water for drinking and other domestic purposes for generations. One village still uses the water for drinking and domestic purposes. The water runoff from the Slim Buttes abandoned uranium mines empty into the Morreau River which flows through the Cheyenne River Indian Reservation. Four villages are located on the Morreau River; however no data is currently available about their use of the Morreau River water. Both of these rivers empty into the Missouri River which empties into the Mississippi River.

4. The following agencies are aware of these abandoned uranium mines and prospects: US Forest Service, US Environmental Protection Agency, US Bureau of Land Management, SD Department of Environment and Natural Resources, the Bureau of Indian Affairs and the US Indian Health Service. Only after public concern about these mines was raised two years ago did the USFS and the EPA pay for a study of one mine this year, 2006.

5. In Southwestern South Dakota, the southern Black Hills also contain many abandoned uranium mines. Nuclear radiation near Edgemont, SD, has already polluted the underground water of the Pine Ridge Indian Reservation according to a study completed in 1980 by Women of All Red Nations. The US Air Force also used small nuclear power plants in their remote radar stations and missile silos which number in the hundreds in this four State region. No data is available on the current status or disposal of these small nuclear power sources.

6. More than 7,000 exploration holes for uranium have been drilled in the southwestern and northwestern Black Hills. More are being planned in Wyoming. These holes go to depths of 800 feet. The exploratory process itself allows

radioactive pollutants to contaminate underground water sources. South Dakota currently has no regulations for In Situ Leach mining of uranium.
7. In Wyoming, hundreds of abandoned open-pit uranium mines and prospects can be found in or near the coal in the Powder River Basin. Yet plans are being made to ship more of that coal to power plants in the Eastern part of the United States. Radioactive dust and particles will be released into the air at the power plants as well as locally in the strip mining process. Federal tax dollars totaling more than $2.3 billion dollars as a loan are planned to be given to a private business, the Dakota, Minnesota and Eastern Railroad, to increase the amount of coal hauled to the power plants. Two other railroads currently haul coal out of this area.
8. In 1972, President Richard Nixon signed a secret Executive Order declaring this four State region to be a 'National Sacrifice Area' for the mining and production of uranium and nuclear energy. This is the same area of the 1868 Fort Laramie Treaty territory, the final home of the Great Sioux Nation Ex. 6 Personal Privacy (PP)

How about NOT approving the mining of uranium? How about NOT approving an exemption allowing toxic wastewater to be injected into an aquifer? We already know how toxic uranium mining can be; I am from New Mexico, and am quite familiar with cases where people bodies and homes are forever contaminated by mining operations, so my vote is that we don't do that anymore Ex. 6 Personal Privacy (PP)

Western South Dakota knows all too well what happens when a uranium mining enterprise abruptly fails. This is how the current uranium mining mess left in the state was created. We should learn from past mistakes rather than hoping another company coming in won't do the same thing. Ex. 6 Personal Privacy (PP)

@@Concerns about hydrofracking

Injection wells like the one being proposed here have caused many problems in areas like Oklahoma over the last few years. The United States Geological Survey data shows that between 1978 and 2008 there were no more than 3 earthquakes per year with a magnitude of 3.0 or greater in Oklahoma. With the proliferation of fracking, the number of earthquake with a magnitude of 2.0 was 585, 887, and 639 for the years 2014-2016. The impact of these earthquakes is borne by citizens who suffer property damage and businesses who lose revenue while they recover Ex. 6 Personal Privacy (PP)

I do not support these draft permits. In one regard, the energy sector has apparently learned nothing from the geological destabilization that has occurred in Oklahoma and other locations that have allowed injection wells as part of fracking activities. Additionally, there are no studies or details indicating what has actually BEEN placed into injection wells. However, we do know that earthquakes have occurred and toxic materials have appeared in the water sources after these injection wells have been allowed. Ex. 6 Personal Privacy (PP)

USGS FINALLY ADMITS THAT FRACKING CAUSES EARTHQUAKES
NO, I SAY A THOUSAND TIMES NO! NO FRACKING TYPE ACTIVITY! PERIOD!
Underground Injection Control
Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. NOT- BIGLY!! Ex. 6 Personal Privacy (PP)

@@Concerns about the price of uranium and future viability of nuclear energy

Renewable energy is making nuclear power obsolete. The price of uranium is already going down and will continue to do so. It is not worth taking any risk knowing that these companies will eventually fold and ride off into the sunset as, is typically the case, leaving the locals with their mess. There is no amount of money that can be held to restore what we currently have when that happens....it's just a matter of time. Ex. 6 Personal Privacy (PP)

There are also serious concerns about the company potentially cutting corners or abandoning the project. The price of uranium has been extremely low since the Fukushima nuclear disaster. With new problems that have since developed in the nuclear power industry the price for uranium will never recover. This could lead to a number of bad business

decisions on the part of the mining company or an abrupt abandonment of the site when the business factors become too unfavorable or the company goes bankrupt. Currently Toshiba-Westinghouse has decided to permanently cease new reactor builds, is considering bankruptcy and could potentially default or abandon the current new US reactors under construction.

Areva is in a similar situation as Toshiba-Westinghouse and would be unlikely to pursue any new reactor builds if they survive their current financial problems. This is all extremely relevant when considering what is permissible risk by a highly unstable private enterprise. Ex. 6 Personal Privacy (PP)

@@Seems contrary to EPA's mission

I find this shocking. No, the uranium bearing portions of the Inyan Kara Group aquifers SHOULD NOT BE EXEMPT from protection under the Safe Drinking Water Act. What in the world is going on? Please, do your job and protect our drinking water. Ex. 6 Personal Privacy (PP)

I am strongly against this measure. It violates everything the EPA stands for. I can only assume you are doing this because of the current president. Stand up and have a spine. Ex. 6 Personal Privacy (PP)

What is this office doing to us? Would you want your children living near there? I wouldn't allow my children to live anywhere near there.
It's plain insane. The EPA is supposed to protect us, not side with big billionaires.
"EPA asks public for permission to allow Uranium mining waste disposal in SD aquifer." Ex. 6 Personal Privacy (PP)

Of course citizens are against allowing toxic waste dumping into our waterways. How can the government even ask? This is the primary reason for EPA. Stop irresponsible actions against our natural places and resources. This effects all people in the US. Ex. 6 Personal Privacy (PP)

I would like to comment on exemption request to inject uranium-bearing waste water into Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. I object and wonder how can this even be considered. What in the world is gong on with EPAULETS to even consider this. Ex. 6 Personal Privacy (PP)

I am writing to you as a believer in the epas mission BEFORE your new boss ever stepped in the building. And that is to provide quality control on the environment and to protect us, the citizens of this country from corporations and their profits over my health and neighbors well being.
It doesn't take a rocket scientist to understand the implications of what is being sought after. Your job is to preserve the land for generations to come. Including the natural inhabitants of a given area. Human, or wildlife. We are all inhabitants of this earth and we are demanding that obvious dangers are unavoidable and cannot be maintained by humans should something go awry. And save the retort about the safe guards in place. We have seen time and time again that these "safeguards" are faulty by design or corners are cut to save time and money. Ex. 6 Personal Privacy (PP)

How can you even consider destroying an aquifer with uranium mining waste? It is inconceivable and appears to be in direct contradiction to the EPA mission to protect our water. Please, stop this kind of disgraceful catering to mining interests and protect our waters! Ex. 6 Personal Privacy (PP)

It's hard for me to believe that the EPA would for one moment consider it acceptable to allow uranium mining waste to be dumped in any aquifer. If the EPA is not our champion and our protection against pollution of our drinking water, the air we breathe, and the God given beauty of our natural environment, then what on earth is its function!??! Please do your job and do NOT allow the dumping of mining waste into the South Dakota aquifer, or any other act of pollution!
Ex. 6 Personal Privacy (PP)

Concerning the potential proposal of permits for uranium injection control into an aquifer, the US and the EPA should be PREVENTING this level of environmental damage to not only our drinking water, but the entire ecosystem. I would like to vehemently voice my opposition to this proposed draft permit. INj, but the water and other natural resources this area provides. It's irresponsible to knowingly allow this level of damage to occur, but it also goes against the very name of the EPA. How can you 'protect' an environment when you're proposing a permit that allows for disposing of waste fluids in the process of uranium mining.
It's astonishing to me that this permit has even pushed to draft stage. As an agency that is supposed to work for the people, for the environment and for the protection of natural resources, this flies in the face of all three.
I strongly urge the outright rejection of this proposed draft, as it could threaten human life and wildlife for potentially many decades to come. It's astonishing to me that the EPA has failed the American public this quickly. Ex. 6 Personal Privacy (PP)

The EPA has been held in high regard in generations past, and the American people trusted that our taxpayer funded EPA would protect our air, water and soil.

Clearly, the EPA has made poor decisions due to the political climate of late. But it is time to take our country back AND WE NEED YOU TO PROTECT US!
We are at a critical juncture environmentally, and hopefully we can trust you to make the hard decision to protect us from any and all uranium mining projects. You know the science--you know the truth. Please make the hard decision and do the right thing. Please protect the American Citizens from this terrifying move toward environmental destruction. Dr. Ex. 6 Personal Privacy (PP)

I don't know how this could possibly be a good idea. I know that Secretary Pruitt wants to protect business interests over the environment, but that is not the role of the EPA! The agency was developed to PROTECT THE ENVIRONMENT.
I'd like to see the science saying this is a good idea and that ground water will not be affected. And if 98% of scientists say it's fine, I would expect Secretary Pruitt to use the same criteria he uses to evaluate scientific evidence for climate change to rule against this invasive action! Ex. 6 Personal Privacy (PP)

Are you seriously considering this? I cannot believe the agency designed to protect the environment is actually asking civilians this question and not going to science...oh wait I forgot under Trump you can forget reality and be completely stupid!!! Ex. 6 Personal Privacy (PP)

So let me get this straight...the EPA, an agency specifically designed to protect the environment, is going to use an aquifer to dispose of "treated" radioactive waste. Seriously? No excuse. NONE I don't live in that area, but I am a human being, with a conscience. Do your jobs Ex. 6 Personal Privacy (PP)

@@Concerns about ability of EPA to monitor the activity because of uncertain future of EPA

NO IT IS NOT GOOD - you are unleashing the potential for another "Flynt, Michigan" debacle...and being the EPA is lead by someone who doesn't believe in CO2 emissions is actively helping climate change; Plus is planning on cutting 1/4 of the EPA's budget....NO - I can't trust the EPA to safely and effectively enforce the restrictions necessary to make the uranium retrieval safe. Ex. 6 Personal Privacy (PP)

I am concerned that the current administration's planned cuts to the EPA will result in insufficient funding and personnel to monitor these wells. Ex. 6 Personal Privacy (PP)

I am concerned that the current administration's planned cuts to the EPA will result in insufficient funding and personnel to monitor these wells. Ex. 6 Personal Privacy (PP)

How do we know if the EPA will properly monitor the treatment of this highly contaminated water if these misguided permits are issued when your Administrator has time and again shown that he sides with business interests first and American Public Health last? Ex. 6 Personal Privacy (PP)

As a US citizen, a mother of three US citizens, and a human, I vehemently object to allowing Powertech to dispose of ISR waste fluids into the Minnelusa Formation.
If this is allowed, despite what I expect will be huge public disapproval, then there should be no exemption of the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act.
The news release on this says the waste must meet radioactive waste and hazardous waste standards, and monitoring will take place to make sure drinking water isn't protected. But in a time when the EPA's leader denies the effect of humans on climate change, effectively denying science, and when science and even the mention of science is under siege by the new administration, why in the (imperiled) world would I believe that anyone will actually hold anyone accountable or test anything?
I'm very concerned in general about the EPA's ability to do its mission, protecting the environment under the leadership of Pruitt. Reading about this particular issue didn't increase my confidence at all.
No, no, no, to allowing this company to dump its uranium, regardless of what supposed cleanup they will do to it or supposed monitoring testing that will make it "safe." Ex. 6 Personal Privacy (PP)

@@Why did EPA take so long to issue these permits?

Below is my question and public comment on two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium recovery project.
Question: You have had the permit applications for many years. Why has it taken so long to issue the draft permits? Comment: The relevant issues concerning environmental impacts were addressed by the USNRC in their EIS and source material license. Ex. 6 Personal Privacy (PP)

@@Concerns about seismic activity related to injection activity

I am amazed and genuinely disheartened to see that the EPA has allowed consideration of the Uzarga mining project in Fall River County, South Dakota. I have been an amateur geologist for many years and own a home in Hot Springs, SD. Knowing the complex nature of Black Hills geology, I find it appalling that you would consider injection well technology safe in an area directly adjacent to the Dewey and Jewel Cave fault zones and their direct connections to both the Barker Dome anticline and the Fanny Peak monocline. Considering what injection well technology has done to the relatively stable geology of Oklahoma and other states, I would think that special consideration would be given to an area that has already shown earthquake activity and that is so directly linked to water supplies throughout the southern Black Hills. Ex. 6 Personal Privacy (PP)

ProPublica completed a review of more than 220,000 well inspections from October 2007 to October 2010, finding that structural failures were routine. More than 17,000 integrity violations were handed out and more than 7,000 of these wells were found to be leaking (https://www.propublica.org/article/injection-wells-the-poison-beneath-us). In addition, research has linked deep injection wells to local earthquakes. These earthquakes have the potential to cause damage to the wells and may also cause structural damage that will impact local populations. Ex. 6 Personal Privacy (PP)

Deep injection wells have the potential to leak. ProPublica completed a review of more than 220,000 well inspections from October 2007 to October 2010, finding that structural failures were routine. More than 17,000 integrity violations were handed out and more than 7,000 of these wells were found to be leaking ([HYPERLINK "https://www.propublica.org/article/injection-wells-the-poison-beneath-us"]). In addition, research has linked deep injection wells to local earthquakes. These earthquakes have the potential to cause damage to the wells and may also cause structural damage that will impact local populations. Ex. 6 Personal Privacy (PP)

@@Mistrust of Powertech fulfilling monitoring requirements

Who will be doing the monitoring of the water? The companies cannot and should not be trusted with this activity. We all know about companies who have historically not provided accurate information to the public when water has been contaminated. This withholding of information has resulted in serious illness or death for people who have been exposed to contaminated water. Ex. 6 Personal Privacy (PP)

@@Against nuclear power

I am opposed to the mining of uranium for nuclear power use. There has been many irresponsible decisions fuled by greed made by present American nuclear power plants; causeing radioactive leaks, explosions, and even leaks in the waste disposal sites. Such accidents put the wellbeing of our country in jeopardy. Mining for more fuel for these types of plants will only cause more health issues in the future. Due to just one nuclear power plant mistake in Japan, scientists now believe all aquatic life will be extinct before 2050. Surely you don't want to have such future catastrophes on your hands by allowing access to more uranium. Thank you for taking the time to hear my concerns. Ex. 6 Personal Privacy (PP)

@@Comments about plans for injection of fluids received from outside the Dewey-Burdock Area

Now we learn that there will be no uranium mining in the foreseeable future but rather the foreign company plans on accepting toxic wastes from outside the area to make their profits at the expense of local population and necessary

water supplies. Please. Please. Protect our environment from these profit mongers. Thank you for your time and consideration. Ex. 6 Personal Privacy (PP)

@@General Questions about the EPA permitting process

I volunteered for Dakota Rural Action several years ago on a petition against giving the permit to Powertech for access to the aquifer for mining. I was at a couple of the hearings back then and was wondering if this time it will be the same. Will people be able to sign up to speak or is it something that has to be requested for ahead of time. Please, let me know. Your response is appreciated.

Not Related

I am very concerned about Pruitt denying climate science. The science is clear and we rely on the EPA for protecting our water, air, and land. We cannot rely on each state to clean up after themselves and not affect other states. We need federal regulation. Ex. 6 Personal Privacy (PP)

Thanks for your reply and everything you do to try to protect our environment. I know our Hawaii congress reps will do everything they can to not let the EPA be dismantled so it can continue its important work. Ex. 6 Personal Privacy (PP)

Questions Received

Here is a quote from the Aquifer Exemption Draft Record of Decision, page 3 -- "The project will involve the injection of lixiviant, consisting of injection interval groundwater with added oxygen and carbon dioxide, into the uranium ore deposits targeted by 14 proposed wellfields consisting of approximately 4,000 Class III injection wells." Shouldn't there be just 84 class 3 injection wells for 14 wellfields? Where do the 4,000 fit in? Or is this a typo? Ex. 6 Personal Privacy (PP)

Could I obtain copies of the comments? Ex. 6 Personal Privacy (PP)

Which EPA program administers the injection well program? Ex. 6 Personal Privacy (PP)

I am reviewing information provided for in the 'Public Notice: Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits' https://www.epa.gov/uic/administrative-record-dewey-burdock-class-iii-and-class-v-injection-well-draft-area-permits . I'm unclear if the "Additional Administrative Record Documents", specifically, the 'Draft Cumulative Effects Analysis' are considered a component of the Class III and V draft permits and thus subject to review and comments. The statement below is copied from the website and if read literally, it could be understood to mean that comments are sought only for the Class III and V draft area permits, and the identification of traditional cultural properties...My agency would like to provide comments on both the contents of the permits and Draft Cumulative Effects Analysis. Please provide us with an explanation of the scope of EPA's request.
In addition to seeking comments on the Class III and V draft area permits, the EPA is seeking public comment on the identification of traditional cultural properties at the Dewey-Burdock Project Site Area of Potential Effects, on the potential adverse effects of the proposed project, and on measures to avoid, minimize or mitigate potential adverse effects on historic and traditional cultural properties pursuant to Section 106 of the National Historic Preservation Act and 36 CFR § 800.2(d) and § 800.6(a)(4).
The EPA is also seeking comment on two options for approval of the aquifer exemption that Powertech requested related to the Class III permit application. The two options are discussed in the Aquifer Exemption Draft Record of Decision available on the EPA Region 8 UIC Program website.
The EPA has performed an Environmental Justice (EJ) analysis for the Dewey-Burdock UIC permitting actions and is seeking comment on the Draft EJ analysis document. Ex. 6 Personal Privacy (PP)

I came to see you with my son back Dec 5, 2016 about Dewey Burdock injection well permits.
At that time, you and Douglas Minter told us that with those permits, that mining waste of the same class as the wells in question could be brought in for deposition at Dewey Burdock legally from other mines, even in other states. You also said that the permits could be sold to another company should the holder of the permits choose, or go bankrupt, as long as the waste deposited was of the same class. Please confirm the legality of that for me. Ex. 6 Personal Privacy (PP)

But are they also allowed to bring in waste from other mines or is the permit for their own wastes only? And why do they say they need two deep injection wells right away if they have no mining planned or started at this time? They have to fulfill the requirements of NRC to find and close all prior bore holes and then redo pump tests to show that the aquifers are contained. No work has been started on that and they have no funds to do so. Will you also require that? Ex. 6 Personal Privacy (PP)

I got this email and it says Powertech/Azarga is applying for 8 injection wells at the Dewey-Burdock site in South Dakota. It also says that the company can pull "in mining wastes from other regional mines and/or sell those waste disposal rights to another company later on."
Are these things true?? Ex. 6 Personal Privacy (PP)

Does this paragraph actually state that despite the comments about treating the water in the preceding paragraph that you are requesting an exemption from treating it?
What waste products are in this water? And who owns these uranium recovery mines?
"EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur."
Thank you for answering my questions. Ex. 6 Personal Privacy (PP)

We are getting conflicting information here in the Black Hills of South Dakota, and I'm hoping you can clarify things. The topic is deep disposal wells in Fall River and Custer Counties in the general area of the Dewey-Burdock uranium mining project. I am preparing expert testimony for the draft permit process and want to be operating from accurate nformation. ■■■■, who met with you in December, says that you indicated that there are as many as twelve deep disposal wells planned in the general area of the Dewey-Burdock project. The recently issued draft permit for the project says that there will be two to four DDWs. Are there other projects planned that we haven't heard about here yet? Or is there some other way to account for the 8 "missing" DDWs? Ex. 6 Personal Privacy (PP)

Comments with Technical Input

I have read the fact sheet for public comment of the two UIC Area Permits to Powertech, for injection wells for uranium recovery and aquifer exemption, for the disposal of treated ISR process waste fluids into the Minnelsusa Formation.
As expected, the EPA permitting process is very thorough. At this writing, I also find myself very aware of, and thankful for, this permitting process, and more importantly, that regulatory oversight exists! It is almost secondary to this thought that I offer my public comment on the permit!
I agree with the additional pump tests in the Burdock Area wellfields targeting the Chilson sandstone, mentioned in section 3.4.2. Also that the Fuson shale confining zone may have some areas compromised by other holes punched through it, and the wellfield pump tests will pinpoint any breaches.
Providing adequate well monitoring and maintenance programs for all the wells, including the monitoring wells, will ensure well operational efficiency and extend the life of the wells throughout the project. Among other water constituents, high TDS and sulfate levels that exist in the formations, as well as the process water, will tend to clog well screens and gravel filter packs over time without vigilance. In addition to the required step tests for fracture determination discussed in section 5.9, routine pump/step tests can be useful for monitoring well efficiencies and the need to treat the wells before problems occur. The flowing artesian wells present within the area will remain a concern and should be watched.
It is my sincere hope and desire that the EPA remains intact; that regulations such as these types of permitting processes and monitoring and remediation regulations, will remain strong and continue to provide oversight of these and other operations. Without the professionalism and dedication of you and others at the EPA, our air, water, and environmental quality will suffer to an alarming degree. Thank you for all of your hard work and diligence. This citizen is appreciative of your efforts. Ex. 6 Personal Privacy (PP)

Comments from Tribes

RE: The EPA Region 8 Underground Injection Control Program has issued Draft permits and a proposed Aquifer Exemption Record of Decision for the Proposed Dewey-Burdock Uranium In-Situ Recovery Site
Dear Consultant:
On behalf of the Cheyenne and Arapaho Tribes, thank you for the notice of the referenced project. I have reviewed your Consultation request under section 106 of the National Historic Preservation Act regarding the project proposal and commented as follows:
At this time, it is determined to be categorized as **No Adverse Effect;** however, if at any time during the project implementation inadvertent discoveries are made that reflect evidence of human remains, ceremonial or cultural objects, historical sites such as stone rings, burial mounds, village or battlefield artifacts, please cease work in area of discovery and notify the THPO Office within 72 hours.
In addition, if inadvertent discoveries are made; pursuant to Title 36 Code of Federal Regulation Part 800.13, as amended; you will also be required to make arrangements for a professional archaeologist to visit the site of discovery and assess the potential significance of any artifacts or features that were unearth. If needed, we will contact the Tribes NAGPRA representatives.
Please contact me at (405) 422-7484 or vrichey@c-a-tribes.org, if you have any questions or concerns. Alternate contact is Micah Demery; she can be reached directly at (405) 422-7416 or mdemery@c-a-tribes.org. Thank you again for your notification!
Best Regards,
Virginia Richey
Tribal Historic Preservation Office/THPO Officer
Cheyenne and Arapaho Tribes

@@ Clean Up Abandoned Uranium Mines at the site

Public comment on uranium mining in the Black Hills
In considering uranium mining in the Black Hills, I urge the EPA to clean up old mines before any new permits are issues,
Ex. 6 Personal Privacy (PP)

We demand: 2) clean up old mines Thank you, Ex. 6 Personal Privacy (PP)

@@ Info about Edgemont

As you probably know, Edgemont became a super fund clean up site and the tailing were eventually buried, however, there still remain old mines that have not been reclaimed to this day, They continually jeopardize our ground water and there are no plans to reclaim those sites after all of these years. How can the EPA even begin to consider another uranium mining project without ensuring that land be reclaimed from the previous fiasco?
I lived in Edgemont in the 1980s while the tailings pile was still on the edge of town. From my home on a hill, overlooking town, I would regularly see the cloud of tailings blow into town. I called the State of SD to report it and they referred me to the Denver office of the EPA, to a gentleman named Mike Hammer. I explained the problem, He said that the tailings pile should have at least a 3 in. cover of top soil and be hosed down regularly to keep it from blowing around. He went on to empathize that our State of SD has very lax environmental oversight when it came to protecting the environment and that there was nothing the EPA could do. I called the mill and spoke to an employee to see if, in fact, they were following the guidelines to keep the tailings from blowing into town. He laughed at me and said that, "the tailings were all over his desk and that the mill was literally getting away with murder". He went on to explain that no one ever checked to make sure they were doing things that they knew they were required to do. I was horrified and began the process of moving out of town. No one has been able to ensure that our water and air are protected and I expect that will only get worse with this new administration. Ex. 6 Personal Privacy (PP)

@@ Will not benefit the community

No mining permits in the Dewey-Burdock, Edgemont area of the Black Hills of SD - - - no permits should be awarded to the uranium mining company Powertech/Azarga. ISL will not benefit the Black Hills nor protect the ground water
Thanks. Ex. 6 Personal Privacy (PP)